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ABSTRACT

This publication reports on a survey to develop a profile of adolescent health in Hawaii in order to develop effective prevention and intervention strategies. The survey covered: general health status; family, peer, and school problems; depression and suicide; use of licit and illicit substances; sexuality and sexually transmitted diseases; and self-esteem. Study participants were 1,335 tenth-grade students at 6 Oahu public high schools. Survey data are presented in 44 graphs and tables displaying analysis by gender, ethnicity, and socioeconomic status. The data indicated that: (1) 42 percent of teenagers engage in sexual intercourse, of whom 39 percent use birth control; (2) 40 percent had problems at home with their parents or family; by gender, 50 percent of females compared to 30 percent of males reported problems at home; (3) 17 percent had attempted suicide; (4) 10 percent (17 percent of females and 4 percent of males) had been sexually abused; (5) 18 percent (23 percent of females and 14 percent of males) use cigarettes; (6) 14 percent had used marijuana; 41 percent had used alcohol; and (7) 15 percent used drugs. By ethnicity, 18 percent of native Hawaiians had low self-esteem and 21 percent of Caucasians had high self-esteem. Those with low self-esteem were more likely to engage in high risk behaviors than those with high self-esteem. Recommendations include the creation of multi-service centers that are school based or school linked where teenagers can receive an array of health, social, and vocational services; expanded state-wide violence prevention and conflict resolution programs; improved accessibility to reproductive health services; more preventive mental health services, including substance use and abuse education, available at accessible locations; and relationship counseling including decision-making skills and life planning education as a mandatory requirement at all high schools in Hawaii. (ND)

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Adolescent Health in Hawai'i:

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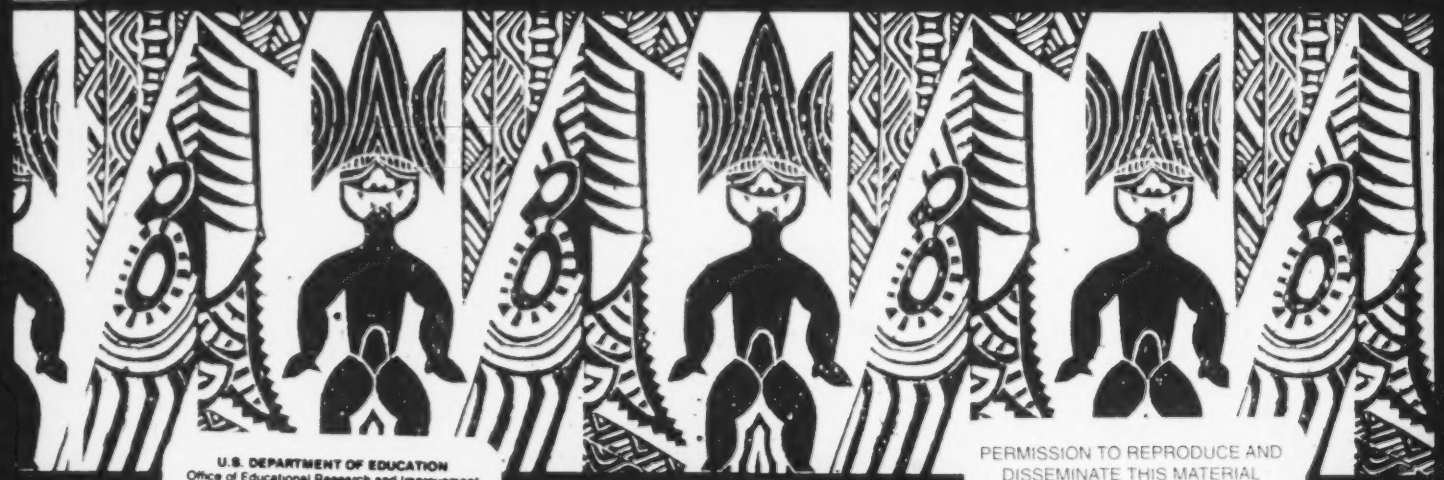

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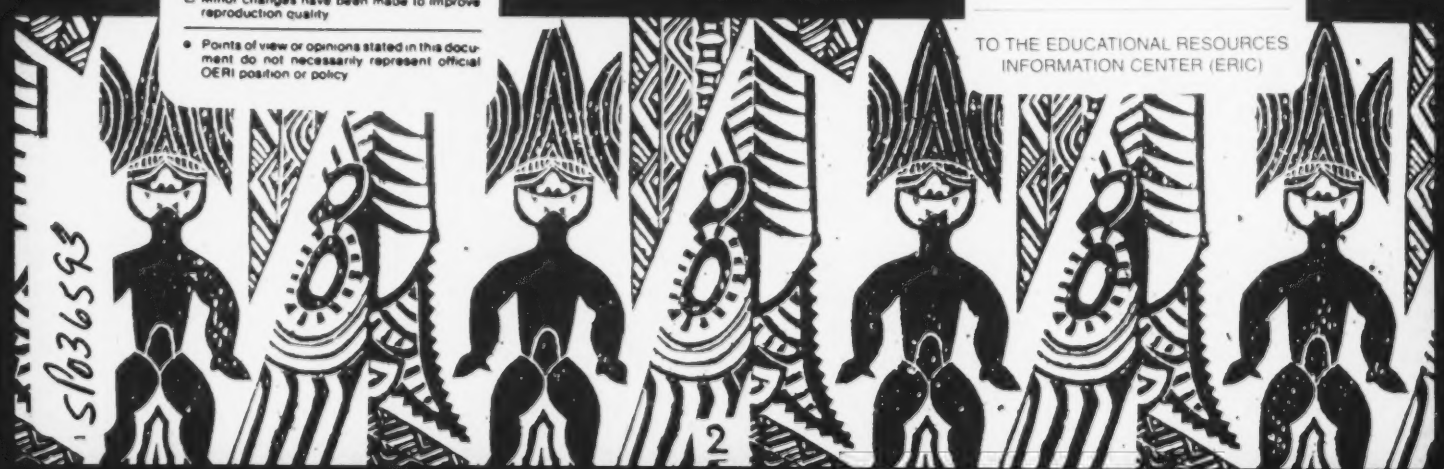

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HAWAI'I DEPARTMENT OF HEALTH

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Adolescent Health in Hawai'i: The Adolescent Health Network's Teen Health Advisor Report

February 1991

This project was funded by the Federal Government's Title V, Special Projects of Regional and National Significance (SPRANS) Grant Number MCJ-153422, with support from the Maternal and Child Health Branch under the Family Health Services Division of the Hawai'i State Department of Health.

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We would like to extend our warm aloha to the particular DOE staff who put in many hours in working with the Teen Health Advisor (THA).

Kailua High School
Meredith Maeda, Principal
Clarence Lavarias, Vice-Principal
Sandra Oda, Health Teacher
Samuel Washington, Guidance Teacher
Melvia Leong, District Complex Nurse
Kathleen Ellwin, Resource Teacher

Kalaheo High School
Jean Tsuda, Vice-Principal
Gail Bennett, Health Teacher

Roosevelt High School
Dorathy Pertz, Principal
Bryan Pang, Peer Education Program Coordinator

Radford High School
Steven Kim, Vice-Principal
Judy Kanoho, Health Aide

Waianae High School
Ed Nakano, Leeward District Superintendent
Dennis Kajikawa, Principal
Sandi Chang, Waianae Transition Center Public Health Nurse
Beth Matsuda, Karen Gomes, Dexter Kumata and Gloria Paet, Health Teachers
Charlotte Kaulukukui and Glenn Higa, Physical Education Teachers

Waialua High School
Helen De Hay, Counselor
Michelle Obena, Waialua Transition Center Career Counselor

Pilot Schools (Data not included in final sample)

Molokai High and Intermediate School
William Rhyne, Principal
Bob Takeo, Department Chair Health and Guidance Teacher

Castle High School
Christine Urban, Vice-Principal
Ken Watanabe, Coach and Health Education Teacher

To all of you, mahalo nui loa

I. Introduction

Since the beginning of the century, public health efforts have greatly reduced the impact of infectious diseases on our population. Improved sanitation, nutrition and immunizations have enabled many adolescents to live longer and healthier lives. However, the 1990's now present new perils that threaten the health and well-being of teenagers.

Traditional measures of health status, morbidity and mortality, are no longer in themselves sufficient for planning and evaluating programs targeting teenagers. The current causes of health problems and challenges to adolescents today are complex. They include the socio-economic, environmental and behavioral causes of disease. Teen health problems of salient concern are those associated with teenage pregnancy, substance use and abuse, stress related disorders and violence, including violence among peers and in the family. The effects of living in an advanced capitalist society and the behavioral responses to poverty, occupational hazards and disintegrating environmental quality have replaced infectious diseases as the primary causes of ill-health.

In Hawai'i, while numerous agencies collect baseline demographic data ie., the causes of death, communicable diseases, injuries and some pregnancy related data, the use of this data is both difficult and problematic. There is little consistency among agencies as to age clusters for reporting purposes and data collected on youth do not necessarily correspond to the developmental or the legal parameters of adolescence. Also, the data tend to be difficult to obtain on a timely basis with often a one to five year time-lag between collection and dissemination. In addition, government departments often only collect data on those who utilize their services.

To overcome and augment these shortcomings of adolescent data collection, the Adolescent Health Network under the direction of the Department of Health sponsored the Revised Teen Health Advisor Survey to develop a profile of adolescents in the State of Hawai'i for planning purposes.

The Teen Health Advisor Survey was developed with input from professionals both in Hawai'i and in the United States. The range of topics included the following:

- Health Care Access for Teenagers
- Sexual behavior and orientation
- Physical Exercise
- Mental Health
- Risk-taking behaviors
- School performance
- Violence
- Substance Use
- Self-Esteem

The questions asked and the issues raised in the Revised Teen Health Advisor Survey were to provide answers that were sought by other health professionals, educators, researchers and program planners in Hawai'i. The myriad of adolescent health issues must be analyzed and understood in a holistic context in order to develop effective prevention and intervention strategies for Hawai'i.

II. Description of Study

Who Conducted the Study?

The Hawai'i Teen Health Advisor Survey was executed by the Adolescent Health Network (AHN) under the direction of the Maternal and Child Branch of the Hawai'i State Department of Health. The AHN is a project of Title V Special Projects of Regional and National Significance. The AHN coordinated the survey activity within Oahu school districts, assisted with computer procurement, data collection and acted as a liaison to agency personnel to develop the survey design, data analysis and report the survey results.

Sample Selection

The THA survey employed a stratified cluster sampling of Oahu tenth graders. The cluster was the school and the strata reflected the DOE's socio-economic status' (SES) classification for the schools. The Department of Education defines SES "as the proportion of students in a school's attendance area whose families receive public assistance" (ie., general assistance and /or aid to families with dependent children - AFDC). The DOE classification of schools into low, medium and high SES reflects the socio-economic make-up of the communities from which the schools draw students. On Oahu these roughly correspond to low income, middle income and upper middle income.

Two schools were randomly chosen from within each strata. Another set of schools within each strata were randomly selected as replacement schools in case the originally selected school could not participate. The six schools that were originally selected were as follows: Radford and Moanalua for high SES, Roosevelt and McKinley for medium SES, and Waialua and Farrington for low SES. Those schools replaced are the following: for Moanalua, Kalaheo was used, for McKinley, Kailua was used, and for Farrington, Waianae was used.

The Teen Health Advisor and Measurement Issues

The AHN Teen Health Advisor is a unique computerized tool that collects information about sensitive teen health knowledge and behaviors. Its author, Dr. Paperny, discovered that whether in a clinic or physician's office, the detection, reporting and primary intervention for high risk behaviors among adolescents can be aided by working with a computer. The teens level of comfort was increased in reporting their behavior to a computer as opposed to a direct interview. According to Dr. Paperny, "the computer allows the adolescent to explore alternatives, is non-judgmental and catches their attention the way animated video-games do". In 1989 Dr. Paperny surveyed 3327 teenagers and 89 percent of them preferred the computer over a questionnaire or personal interview and they were all willing to share the printout with the pediatrician. (Journal of Pediatrics 1990, Vol. 116, No.3, pp. 456-462)

Recent research in Hawai'i by the Department of Education pointed out that the predominant covariates of adolescent substance use were the community's socio-economic status (SES), the student's grade level, age and ethnicity. (P. Anderson, and D. Deck, Student Substance Use and Abuse in Hawai'i, December 1987)For this study, Dr. Paperny's THA was revised to include 100 questions that address a wide range of issues affecting teen health. The areas covered are: (1) general health status, (2) family, peer and school problems, (3) depression and suicide, (4) use of licit and illicit substances, (5) sexuality and sexually transmitted diseases and (6) two series of questions on self-esteem.

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Some of the questions depended on the students responses to previous questions and others are gender specific. For example, a question on whether they have regular menses was asked only of females. The major difference between this study and the two other adolescent data base studies done in Minnesota and Alaska, is inclusion of 34 additional relating to self-esteem. Two scales including Rosenberg's Self-Esteem Scale and Coopersmith's Self-Esteem Inventory were added to ascertain the level of students self-esteem and how it correlates to other high risk behaviors ie., self-esteem and drug use, teen pregnancy etc. The findings of this survey are based on students' self-reported answers. Questions were also added to determine relative accuracy and honesty.

Limitations of the Findings

This is one of the largest comprehensive surveys of teenagers' health in Hawai'i and the only one undertaken for Oahu tenth graders. Given the size of the sample and the population on which the survey was conducted the findings are significant for those tenth grade youth in public schools. The study was limited to tenth grade students because of ease of access to tenth graders in Department of Education schools. All high school students take health as a required course in their sophomore year and the topics covered by the THA survey paralleled those in the DOE's health curriculum.

The Neighbor Island high schools were not part of this study due to funding limitations. The sample is representative within each school but is not representative for the entire general population. Therefore, the findings should be limited to the central island of Oahu.

In addition, the following groups of students were not represented in these findings:

- Oahu students living in and attending schools on Neighbor Islands.
- Students attending private or parochial schools on Oahu.
- Students who are in institutionalized settings: the state hospital or Koolau correctional facility.
- Teens who are not in school such as dropouts and runaways.
- Teens who are not in the tenth grade.
- Teens who were not attending school on the day the survey was administered.

Interpretation of the Findings

The information collected in this report is based on the responses of 1,335 students who completed the Adolescent Health Network's Teen Health Advisor (THA) Survey. These students came from six Oahu public schools and were all tenth graders during the 1989–1990 school year. The average age of the tenth grade respondents is 15.5 years old. The schools who agreed to participate were Roosevelt from Honolulu District, Radford and Waialua from Central District, Kalaheo and Kailua from Windward District, and Waianae from Leeward District. (See Figure 1)

Figure 1. Location of Six Sample Schools on Oahu and Number of Respondents per School

The data collected represent 17 percent of the total tenth grade public school enrollment on the island of Oahu. Approximately 71 percent of the eligible students in participating schools completed the survey. Their responses are included in this report. An additional 6 percent were not included in the report for the following reasons: at Kalaheo High School the computer with the data disk was stolen and at Waialua High School there were technical problems with the disk and the data was not stored in the memory.

Margin of Error

The study design developed by Michael Heim gave a margin of error of plus or minus 9.1 percent at the 95th confidence level for a sample size of 1,879. The estimated margin of error calculation associated with the prevalence rates derived from the data is shown in Table 1.

Table 1. Estimated Prevalence Rates and Margin of Error for Specific Behaviors

CATEGORY:	PREVALENCE RATE PER 100
CIGARETTE USE	18.6% (±1.9)
MARIJUANA USE	14.3% (±4.1)
ALCOHOL DRINKING	41.3% (±6.7)
USE DRUGS	15.4% (±2.6)
LOVER	40.3% (±1.2)
SEXUAL INTERCOURSE	43.4% (±4.9)
USE BIRTH CONTROL	16.9% (±2.0)
SEXUALLY ABUSED	11.0% (±2.0)
SUICIDE ATTEMPT	17.0% (±2.5)

III. The Characteristics of the Students

The respondents in the survey were asked to provide demographic and descriptive information about themselves. These data are helpful in both evaluating the representativeness of the sample and in describing the characteristics of these students.

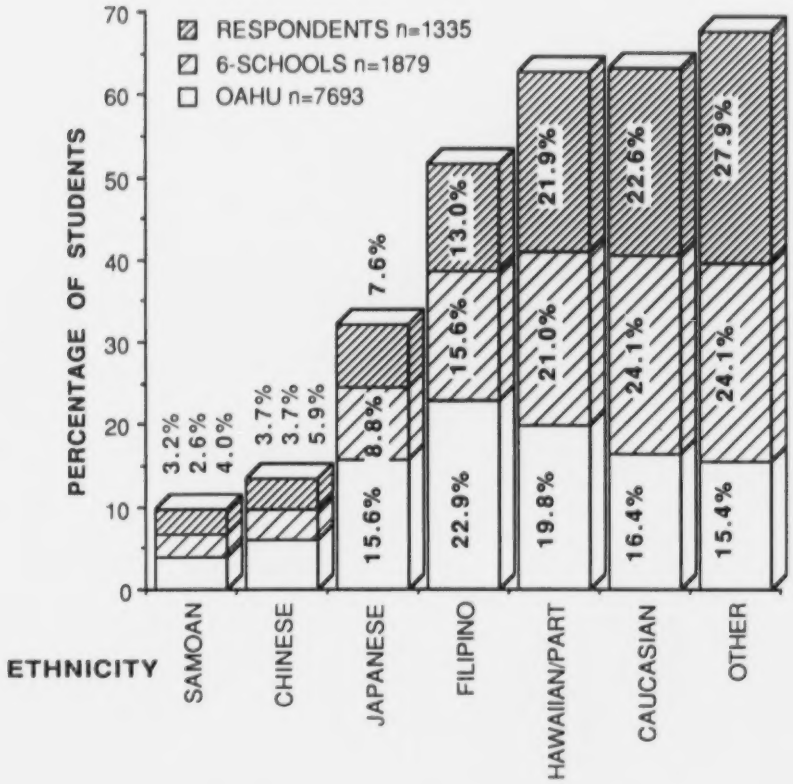
Ethnicity

Due to our varied ethnic groups in Hawai'i and their differing perceptions and states of health and wellness, it is important to differentiate the ethnic breakdown of the sample. Figure 2 indicates that the ethnic composition of Oahu tenth graders are predominantly Filipinos (22.9 percent), Hawai'ians and Part-Hawai'ians (19.8 percent), Caucasians (16.4 percent) and Japanese (15.6 percent) in that order.

However, when looking at the six sample schools ethnic compositions, the order and percentages are markedly different. Caucasians make-up 24.1 percent of the population followed by "Others", Hawai'ians/Part-Hawai'ians, Filipinos and Japanese. One reason for this is different ethnic groups are more likely to attend certain public schools and gravitate to particular geographic areas of Oahu.

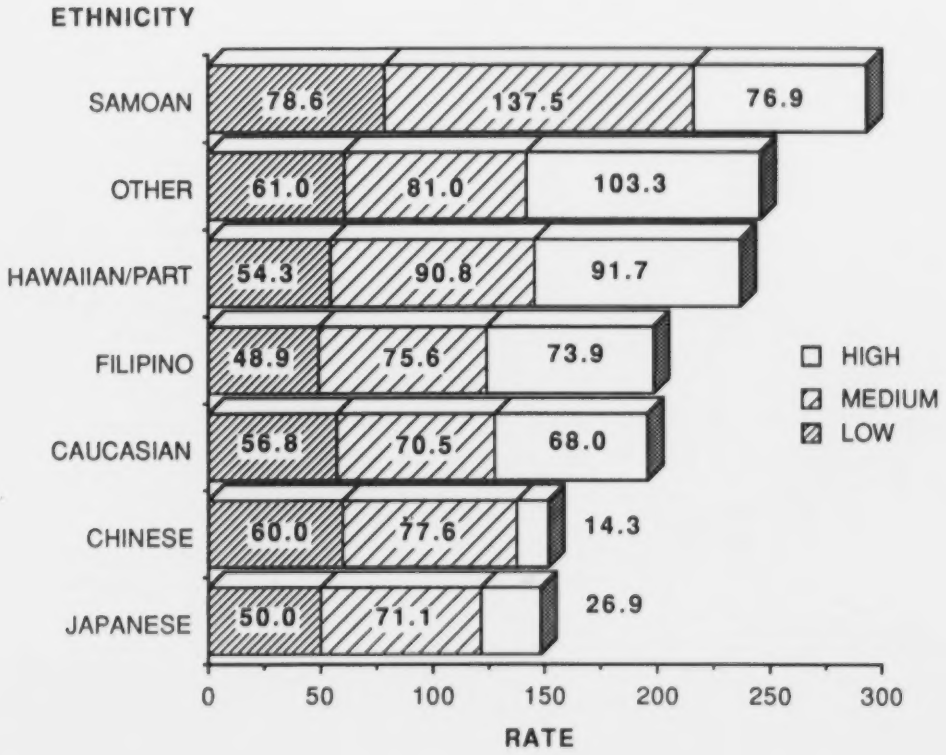
When comparing the ethnic composition of the six sample schools to the respondents from those schools, there is another change in the ethnic breakdown. "Other" is the largest group (27.9 percent) among the respondents where they are about equal with Caucasians in their representation in the six sample schools (24.1 percent). These discrepancies may be due to perceptual differences in defining one's ethnicity, the DOE classifications are given by the parents of students and the THA data were self-reported by the students themselves. In addition, the DOE has 14 different ethnic categories, whereas THA has only 9. The original 14 categories developed by the Department of Education were narrowed to accommodate the original THA classifications for ethnicity and to make it easier to compare with other United States studies. The following DOE ethnic groups were placed in the "Other" category: Native American Indians, African- Americans (Blacks), Portuguese, Spanish-Puerto-Rican and Indo-Chinese. The original THA included additional categories for "mixed other combination" and "other or not sure"; in the analysis these were combined under "Other". The respondents ethnic distribution also depended on the participation of all students belonging to a particular ethnic group and their access to the THA computer when the survey was conducted.

Figure 2. Percent Distribution of Tenth Graders in Oahu Public Schools, Sample Schools and Respondents by Ethnicity



The study design looks closely at socio-economic status to achieve a representative sample. In Figure 3, the response rates of students is compared across economic strata by ethnicity. Overall, the students in the high and medium strata have high participation, responses rates of 77 percent and 80 percent respectively, in contrast to those in the low strata with a response rate of 55 percent. Within the low strata, the Hawai'ians/Part Hawai'ians and Filipinos have low participation when compared to their numbers in the strata. In the high strata, Chinese and Japanese have very low participation rates. However, their population in that strata is quite small. It should be noted that the response rates by ethnicity are not entirely accurate due to the perceptual differences in classification by the DOE and the students. This perceptual mismatch is quite obvious in the medium and high strata where a response rate above 100 is observed in the "Samoan" and "Other" ethnicities. Such a response rate is impossible and can only be explained by the perceptual mismatch in addition to the above mentioned reasons.

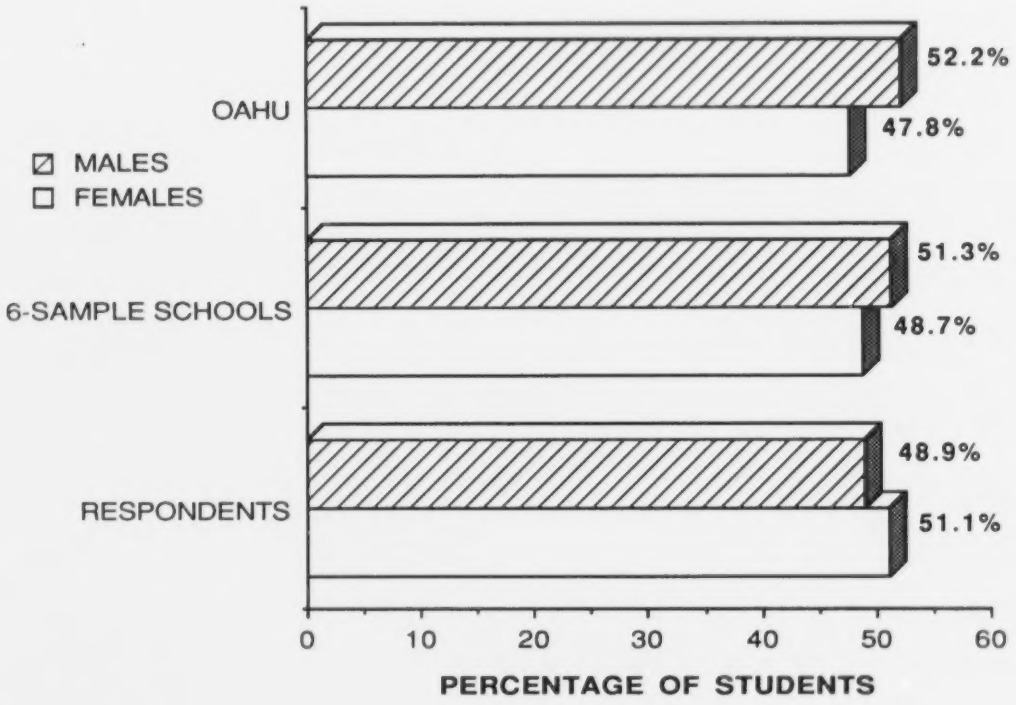
Figure 3. Response Rate by Socio-economic Status (Strata) and Ethnicity



Gender

Of the 1,335 respondents 653 (49 percent) were male and 682 (51 percent) were females. This compares with an Oahu wide gender breakdown where 52 percent of the public high school student body are males and 48 percent females. (See Figure 4)

Figure 4. Percent Distribution of Tenth Graders in Oahu Public Schools, Six-Sample Schools and Respondents by Gender



IV. Physical Health Indicators and Standards of Well-Being

The survey focused predominantly on the current high risk behaviors associated with adolescence, such as sex and drugs. There were a few questions to determine physical health and well-being including the links between physical, emotional and environmental or social health.

In the THA survey, students were asked to report on seat-belt use (See Figure 5), drinking and driving behavior (See Figure 6), along with questions about their access to adequate health care (See Figures 7 and 8) and frequency of weekly exercise (See Figure 9).

Driving in a Motor Vehicle

Figure 5. Seatbelt Use in Motor Vehicles by Gender

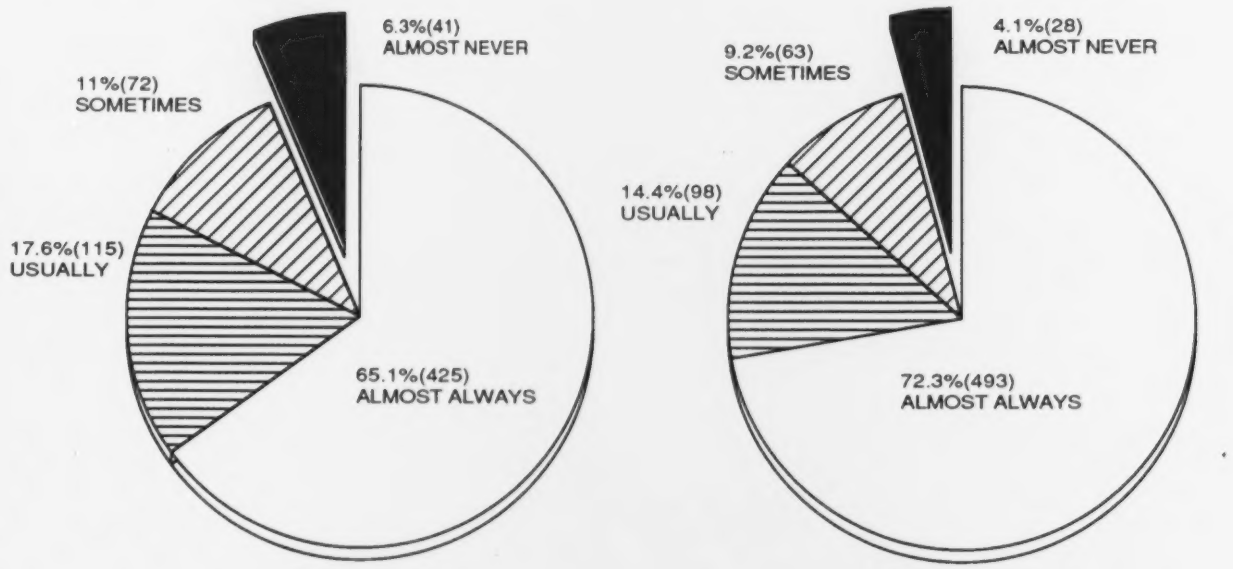
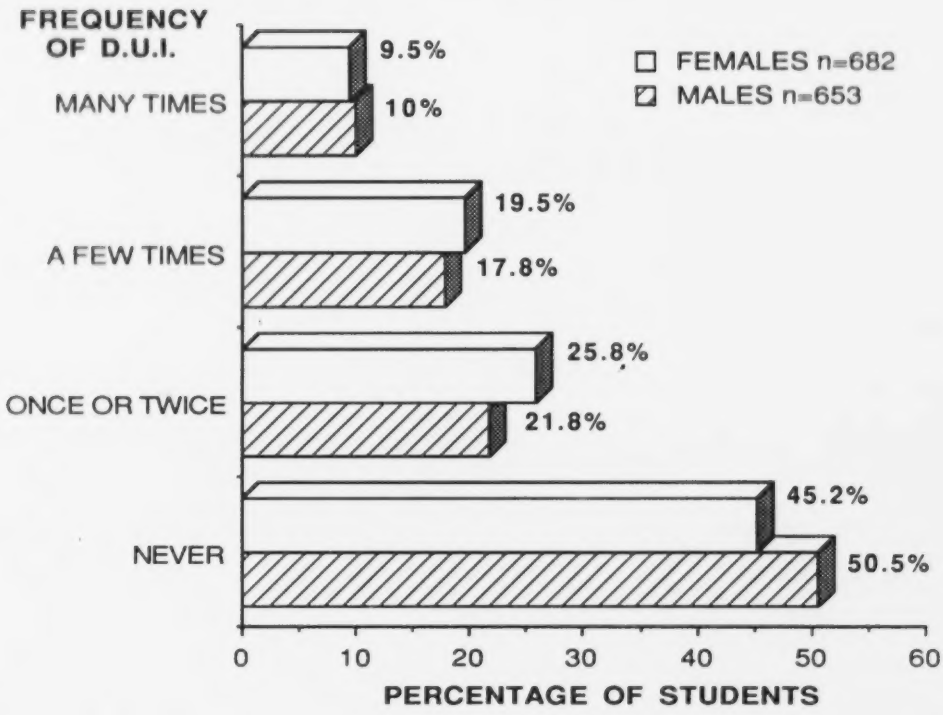


Figure 6. Frequency of Driving/Riding in a Car Where the Driver Was Drinking by Gender

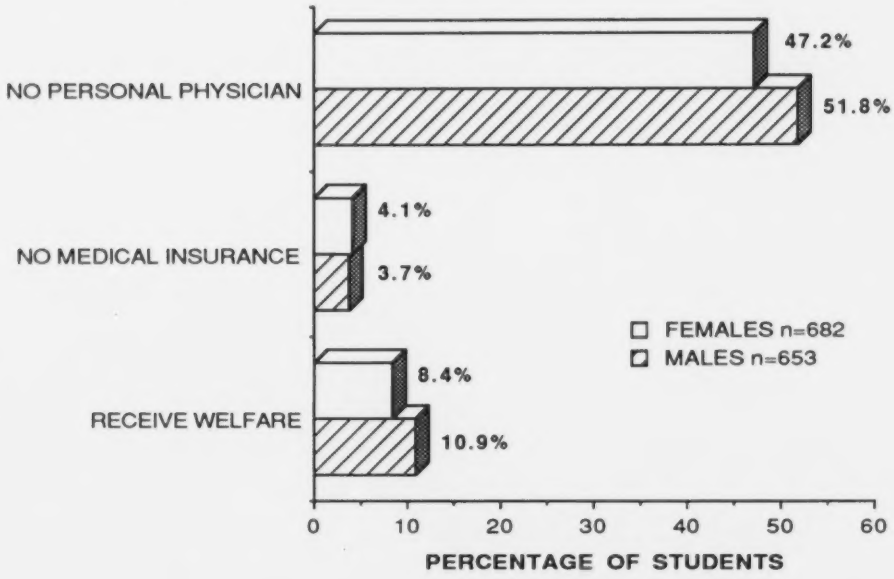


These figures show, respectively, that only 5 percent of Hawai'i's teenagers almost never or rarely use a seatbelt, and 52 percent have been drunk or been in a car with a drunk driver. When comparing students who drink and drive by socio-economic strata there is a clear progression where more students in the low and medium socio-economic strata drink and drive than those in the high socio-economic strata. Fourteen point two percent of the students in the low SES often drink and drive compared to 8.7 percent of those in the medium SES and 7.8 percent in the high SES.

Health Care Access Issues

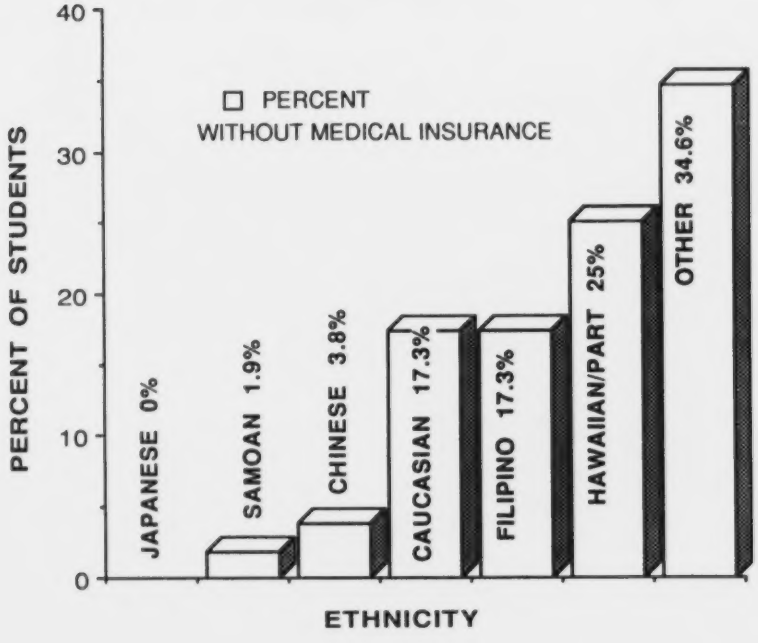
In Hawai'i, a new state-wide preventive insurance plan, the State Health Insurance Plan (SHIP), assures universal access to preventative medical services. While not everyone has a personal physician with whom they can talk to, the majority do have insurance. In Figure 7, males and females are compared for their access to medical insurance, welfare status (included since welfare clients also qualify for medicare) and whether they have a personal physician. It is most striking that almost half of both males and females do not have a personal physician.

Figure 7. Health Care Access Factors by Gender



In Hawai'i, insurance coverage falls along ethnic lines of demarcation. Figure 8 shows the ethnic composition of those with no health insurance. The Japanese and Samoans are most likely to have health insurance and "Others", Hawaiians/Part-Hawaiians and Filipinos are least likely to have medical insurance.

Figure 8. Health Insurance Patterns by Ethnicity

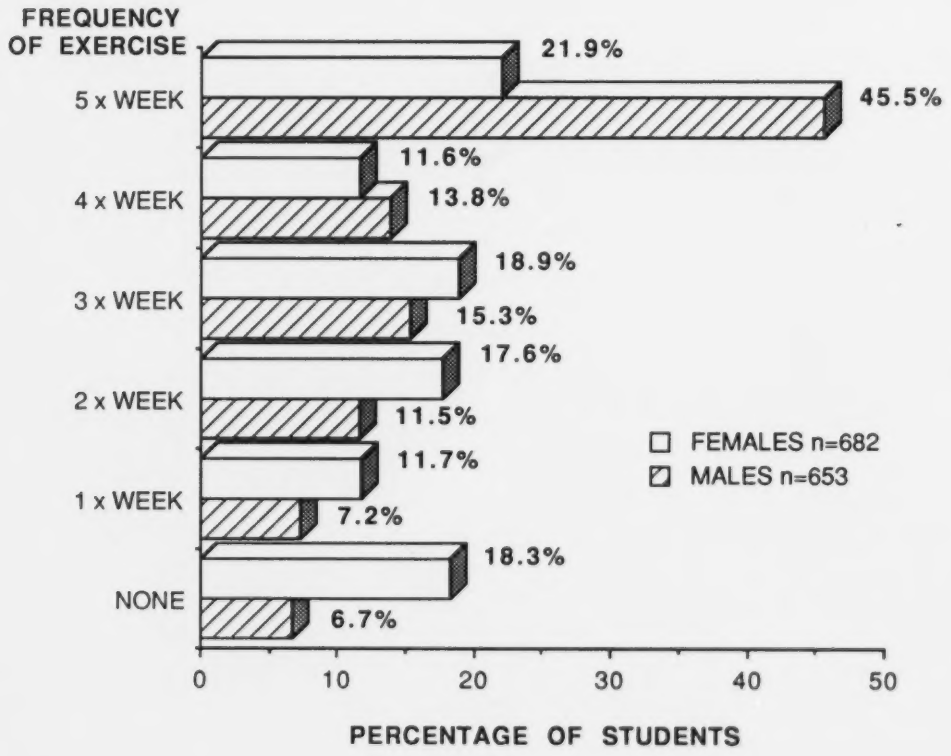


It is very important for an adolescent to have a personal physician they can communicate with about matters associated with the adolescence. While 48 percent of the males and 53 percent of the females had a personal physician, females had a harder time talking to their physician about personal matters. Forty-four percent of the females compared to 54 percent of the males felt they could talk to their doctors about personal issues.

Physical Exercise

Finally, students were asked about their frequency of physical exercise and how it compares to a healthy norm of 1/2 hour of exercise three times a week. (See Figure 9)

Figure 9. Frequency of Physical Fitness by Gender



There is an overall progression of the percentage of students getting more exercise each week. However, there are dramatic differences between males and females. Females still got much less exercise than males: 52 percent of the females compared to 75 percent of the males got 1/2 hour of exercise at least 3 times a week.

V. Emotional Health and Well-Being

Emotional health is an integral part of being a well-rounded adult capable of functioning in our hectic and often critical world. The students in the THA survey were asked many questions about their emotional state and what their deeply rooted worries and concerns were. The key areas addressed in this section are: 1) parental and family issues, 2) feelings and attitudes towards school, 3) teen parenting, and 4) suicide and depression. THA had specific questions on self-esteem. However, these are reserved for discussion in chapter nine which will include all of the dependent variables associated with good or poor self-esteem.

Feelings About Parents and Family

There are pronounced perceptual difference between how females and males see family relations. Two out of every five respondents reported they had problems at home or with family in general. Close to two-thirds of the THA respondents said their parents took their feelings into consideration. More males than females say their parents consider their feelings. Similarly, when students were asked if their parents understand them: only 57 percent of the females said they did compared to 71 percent of the males. When asked if they often think of leaving home, 37 percent of the males said yes compared to 54 percent of the females.(See Table 2) About 11 percent of those who felt like leaving home ran away for more than one day in the previous six months.

Table 2. Perceptions of Family Relations

PERCEPTIONS:	MALES n=549 %/NUMBER	FEMALES n=641 %/NUMBER	TOTAL n=1190 %/NUMBER
PARENTS CONSIDER MY FEELINGS	66 (360)	61 (391)	63 (751)
MY PARENTS UNDERSTAND ME	71 (389)	57 (363)	63 (752)
MY PARENTS AND I HAVE FUN TOGETHER	67 (365)	64 (413)	65 (778)
NO ONE PAYS ATTENTION TO ME AT HOME	19 (104)	24 (155)	22 (259)
MANY TIMES I FEEL LIKE LEAVING HOME	37 (204)	54 (345)	46 (549)
GETS UPSET EASILY AT HOME	43 (234)	54 (364)	49 (578)

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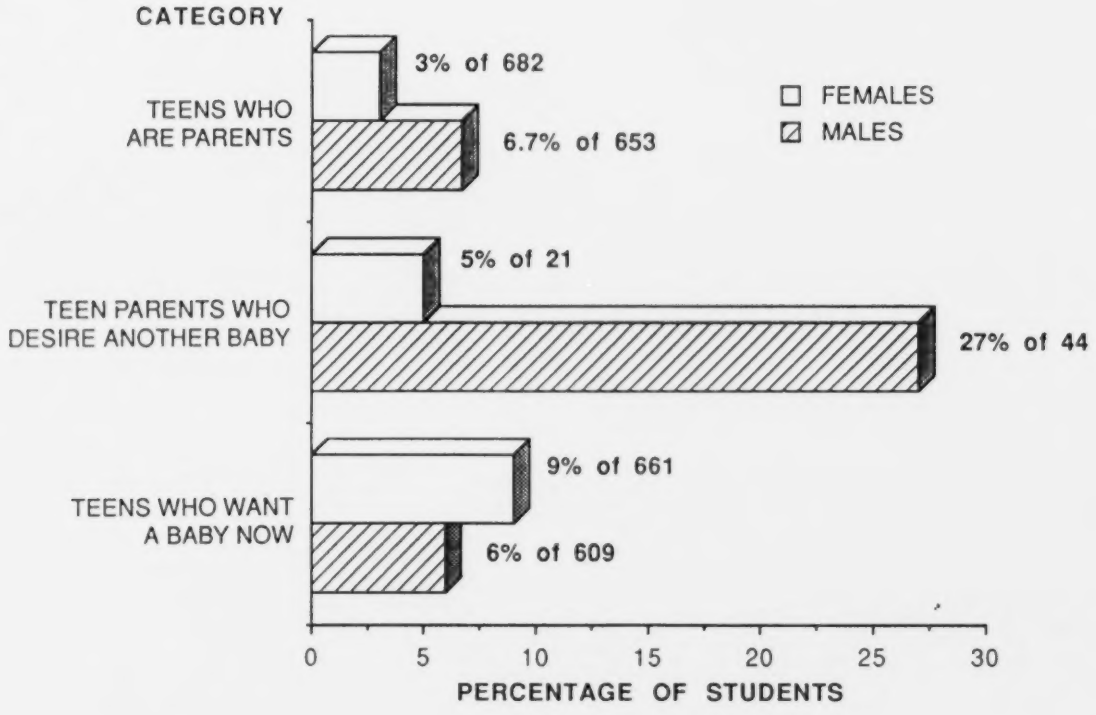
Teen Parenthood

One of the biggest teen health concerns is the high rate of teen pregnancy and the idea that very young teenagers want to be teen parents. Claire Brindis, an authority on adolescent pregnancy and a sexuality researcher in California, points out that teens who have little to value of themselves see parenthood as a way to become somebody and gain self-esteem and a sense of self-worth. In Figure 10, we see some interesting patterns emerging for tenth graders in Hawai'i.

Figure 10. Teen Parenting Trends by Gender

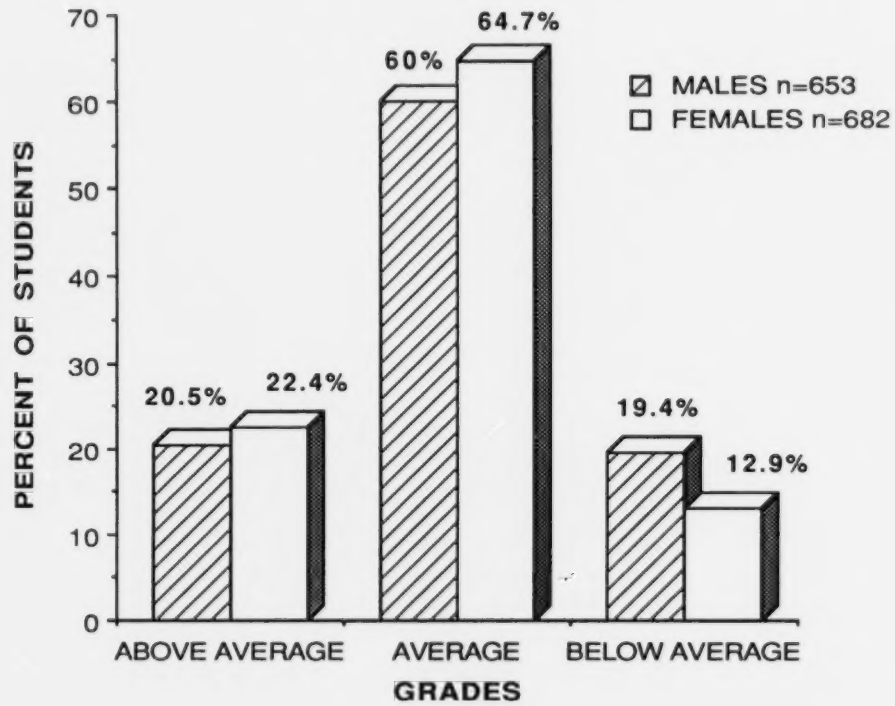


Male students are more likely to be parents, 7 percent, compared to only 3 percent of the females. In addition, males (27 percent) are more likely to want another baby compared to females (5 percent). This fact presents particular challenges to teen pregnancy prevention programs that almost exclusively reach only females.

School and School Performance

Teenagers spend a major portion of their time in school. The survey asked teens some important questions about school performance. The students were asked "how were their grades in school"and given three choices: below average, average and above average. Overall, females said they per formed much better than the males: 13 percent of the females got below average grades compared to 19 percent of the males and 22 percent of the females got above average grades compared to 20.5 percent of the males. (See Figure 11)

Figure 11. School Performance by Gender



In the final analysis, the respondents self-assessments of average, above and below average grades were cross-tabulated to select behaviors such as depression, pregnancy, substance use and the conundrum of problems associated with sexual abuse.

In Hawai'i, less than 10 percent of the survey respondents frequently missed school. More than 40 percent of those who frequently missed school perceived their grades as below average in contrast to those who rarely (10 percent) or occasionally (23 percent) missed school. In addition, those who had poor attendance, measured by frequency of missing school, were five times more likely to have below average grades than those with above average grades. Those with below average grades were significantly more likely to engage in activities that put their health at risk than those with above average grades. (See Table 3)

Table 3. Relationship of Students Self-Reported Grades to Select Risk Factors

RISK FACTORS 1. AT LEAST WEEKLY USED:	n=287 ABOVE AVE. GRADES	n=215 BELOW AVE. GRADES
CIGARETTES	5.9% (17)	30.7% (66)
ALCOHOL	4.9% (14)	20.5% (44)
MARIJUANA	1.0% (3)	15.8% (34
2. EVER:		
HAD SEXUAL INTERCOURSE	28.9% (83	47.9% (103)
ATTEMPTED SUICIDE	11.2% (32)	24.2% (52)
USED DRUGS	9.1% (26)	29.8% (64)
BEEN SEXUALLY ABUSED	7.0% (20)	14.4% (31)

The difference among grades is perhaps most striking in students who use drugs. Only 9 percent of the students who have above average grades used drugs compared to 30 percent of those with below average grades. In addition, those who had poor attendance measured by frequency of missing school, were five times more likely to have below average grades than those with above average grades.

Teen Suicide

The respondents were asked questions about their emotional state including key questions about suicide. Forty-two percent of the respondents said they often felt sad or upset; and an additional 37 percent said they felt sad recently. However, close to 10 percent of the males and 23 percent of the females had actually attempted suicide. Of those who attempted suicide, 29 percent of the males compared to 42 percent of the females had considered suicide at least once. For our purposes in the analysis, those students determined at risk for suicide were those who answered yes to the following: (1) to often feeling sad, (2) recently feeling sad and (3) attempting suicide. "Low risk" was defined as any teen who thought about suicide over six months ago or who could not remember their previous suicide attempt. "High risk" was defined as any teen who thought about suicide in the previous six months. In Table 4, these data on low and high risk for suicide were cross-tabulated with other select risk factors. (See Table 4)

Table 4. Who is at Risk for Suicide?

ASSOCIATED BEHAVIORS:	n=265 HIGH RISK	n=516 LOW RISK
1. NEVER USED ALCOHOL	40% (105)	60% (309)
2. USES ALCOHOL EVERY WEEK	18% (48)	7% (37)
3. EVER USED DRUGS	27% (72)	14% (71)
4. EVER RUNAWAY FROM HOME	15% (41)	5% (25)
5. EVER BEEN SEXUALLY ABUSED	23% (62)	13% (65)

It is apparent that students who are at high risk for suicide are much more likely to engage in using drugs, to have been sexually abused and to have runaway from home. It should be noted that 66 percent of the males and 49 percent of the females surveyed do not have any recollection of the last time they thought of suicide.

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VI. Violence

In Hawai'i as in other parts of the country violent behavior is on the upswing. THA looked at violence in the family and violence among peers.

Peer and Family Violence

Students in THA were asked specific questions about their observations of violent behavior inclusive of sexual abuse. Where physical violence leads to injury students were asked to comment on the frequency of violence in their home and among their peers. (See Figures 12 & 13)

Figure 12. Experience of Family Violence by Gender

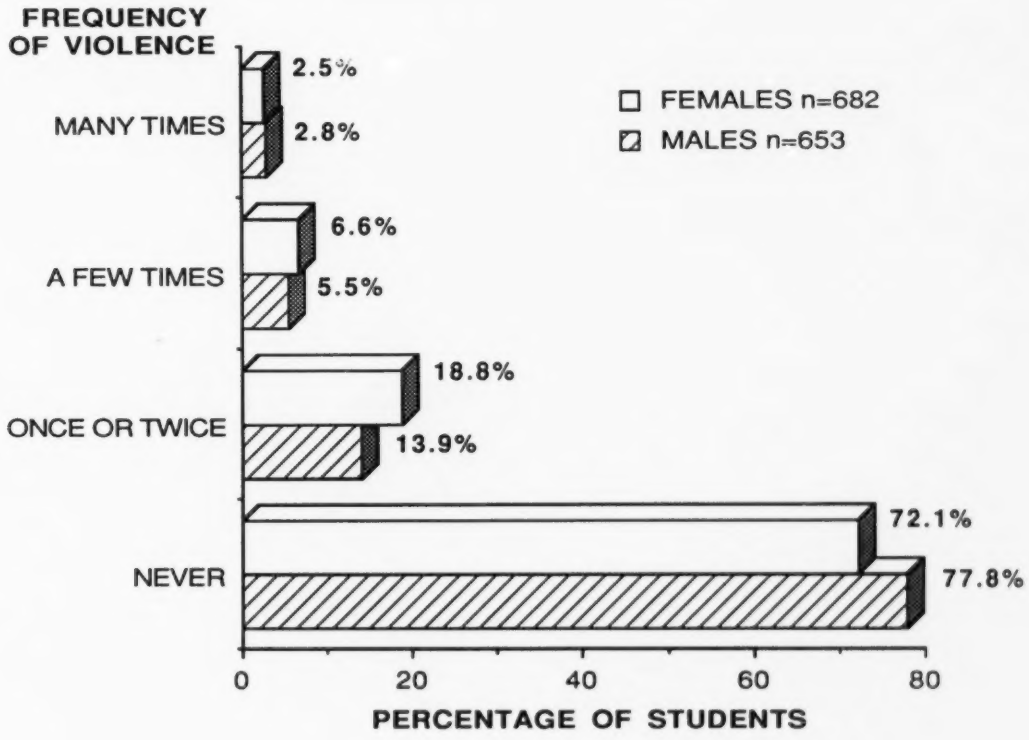


Figure 12 shows male teenagers are less likely to have observed or been involved in family violence than females: 22 percent of the males versus 28 percent of the females observed or were victims of family violence. However, as shown in Figure 13, when it comes to peer violence, more males (46 percent) than females (35 percent) experienced or observed violence leading to injury among their peers. Figure 14 shows that those who frequently ran away from home were at least four times as likely to have faced violence among their peers or family than those who never ran away.

Figure 13. Experience of Peer violence by Gender

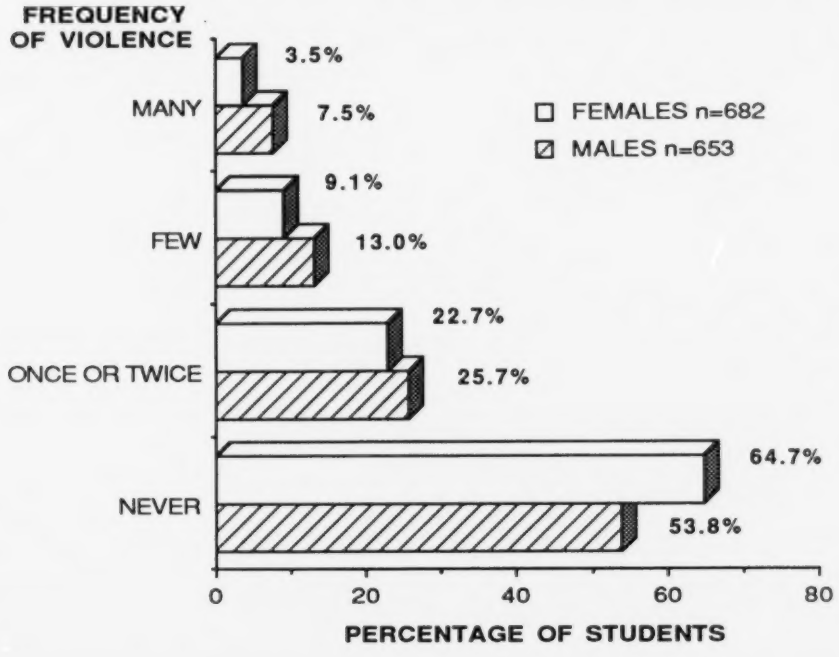
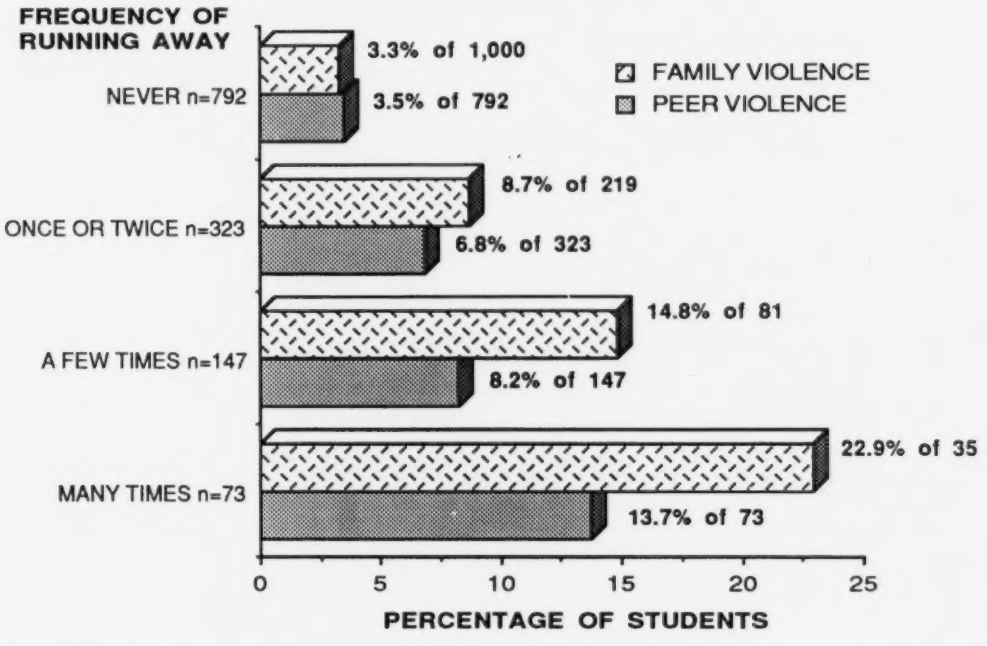


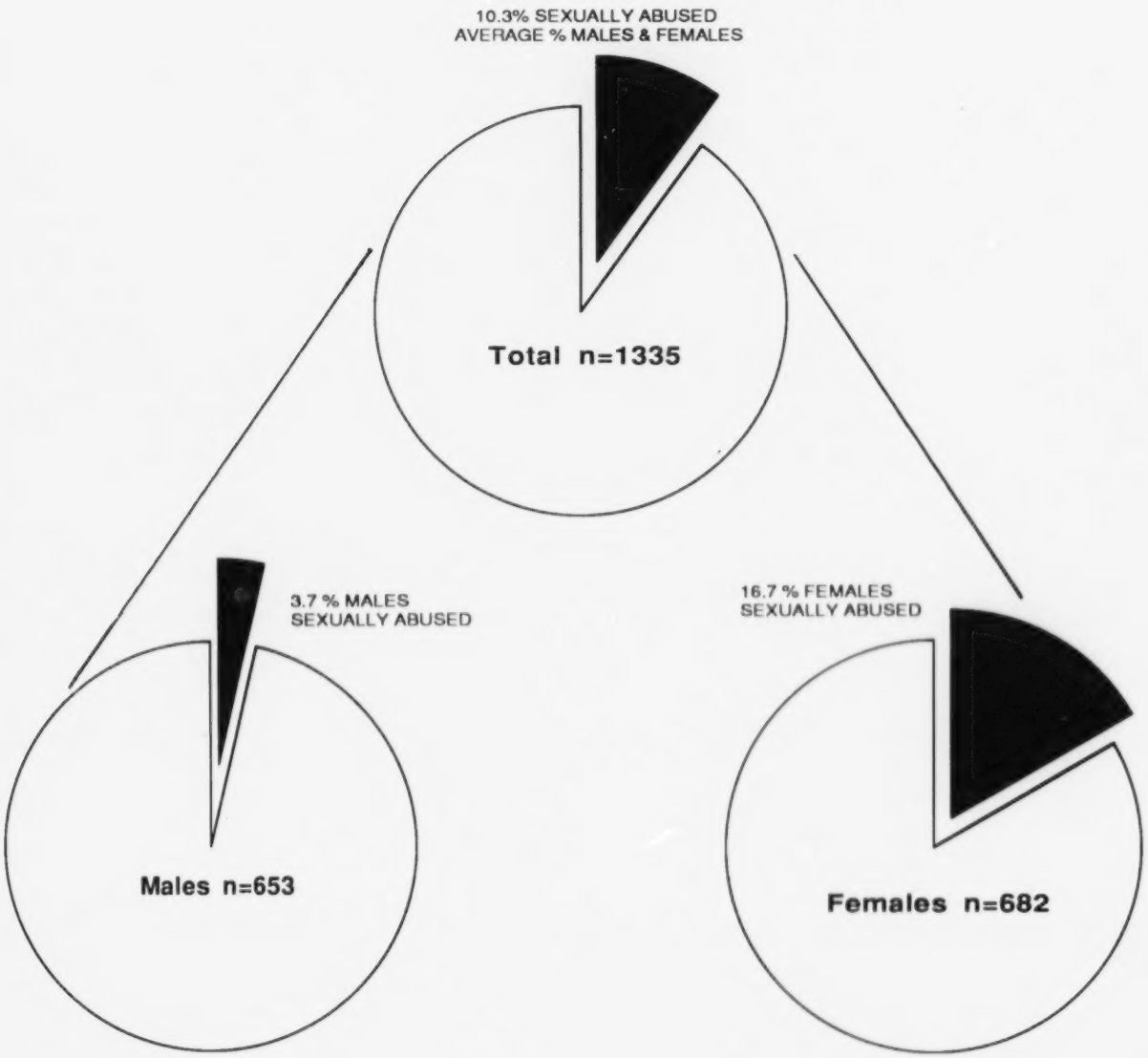
Figure 14. Peer and Family Violence Compared to Frequency of Running Away from Home by Gender



Sexual Abuse

Respondents were asked whether they had been sexually abused. Those who were abused were also asked to identify the abuser. Sexual abuse is significantly higher among females than males. (See Figure 15)

Figure 15. Percentage of Sexual Abuse by Gender



Almost 5 times as many females are sexually abused as males – 4 percent of the males compared to 17 percent of the females. Males report an earlier onset of abuse at the average age of 10.6 years compared to females at an average of 11.6 years old. As seen in Table 5, the abuser is most likely to be a relative for both genders.

Table 5. Sexual Abuse by Abuser and Frequency of Abuse by Gender

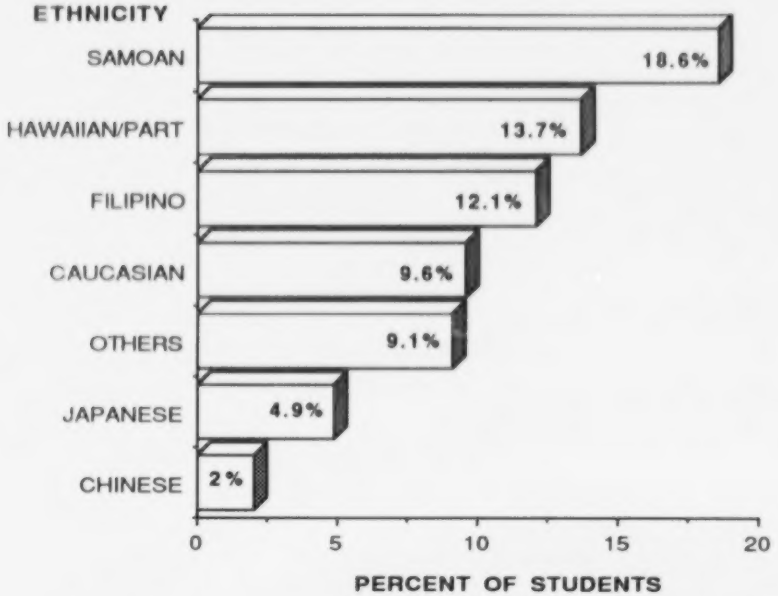
1. WHO DID THE ABUSE:	MALES n=24	FEMALES n=114
PARENT	4.2% (1)	5.3% (6)
STEP-PARENT/MOM'S BOYFRIEND	0% (0)	10.5% (12)
BROTHER	0% (0)	3.5% (4)
RELATIVE	45.8% (11)	54.4% (62)
STRANGER	12.5% (3)	3.5% (4)
NONE OF THE ABOVE	37.5% (9)	22.8% (26)

2. HOW OFTEN DID THE ABUSE OCCUR:		
ONCE	62.5% (15)	52.6% (60)
A FEW TIMES	20.8% (5)	35.1% (40)
OFTEN	16.7% (4)	12.3% (14)

However, more males reported abuse by strangers, 13 percent, compared to females, 4 percent. Both sexes reported their abusers were more likely to be "other" than the categories listed. Thirty-eight percent of the males and 23 percent of the females stated the abusers were "other".

There were very different rates of sexual abuse with the different ethnic groups. The group with the highest rate of abuse were Samoans (19 percent) followed by Hawai'ians (14 percent) and then Filipinos (12 percent). These were followed closely by Caucasians (10 percent) and Others (9 percent). (See Figure 16)

Figure 16. Percentage Reporting the Incidence of Sexual Abuse by Ethnicity



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Abused youth were much more likely to report other at risk behaviors such as using drugs and doing poorly in school. (See Table 6)

Table 6. The Inter-Relationship between Sexual Abuse and Select at Risk Behaviors

INTERRELATIONSHIP:	SEXUALLY ABUSED YES n=138	SEXUALLY ABUSED NO n=1197
EVER GET BELOW AVERAGE GRADES	22% (31)	15% (184)
EVER FREQUENTLY MISS SCHOOL	10% (14)	8% (92)
EVER USE DRUGS	29.7% (41)	13.5% (162)
EVER USE ALCOHOL	55.1% (76)	39.7% (475)

It is apparent that females are much more likely to exchange sex for drugs or money. Students were asked if they received drugs, money or services for sex in the last six months. Those who were sexually abused were more than 3 times as likely to prostitute themselves compared to those who were not abused. The emotional profile of those sexually abused indicates they are at higher risk for suicide, sexual intercourse, and depression:

- Suicide – 44 percent of those abused versus 13 percent of those who were not abused.
- Sexual intercourse – twice as likely to be sexually active than those not abused.
- Depressed, sad or unhappy – 72 percent of those abused compared to 38 percent of those not abused.

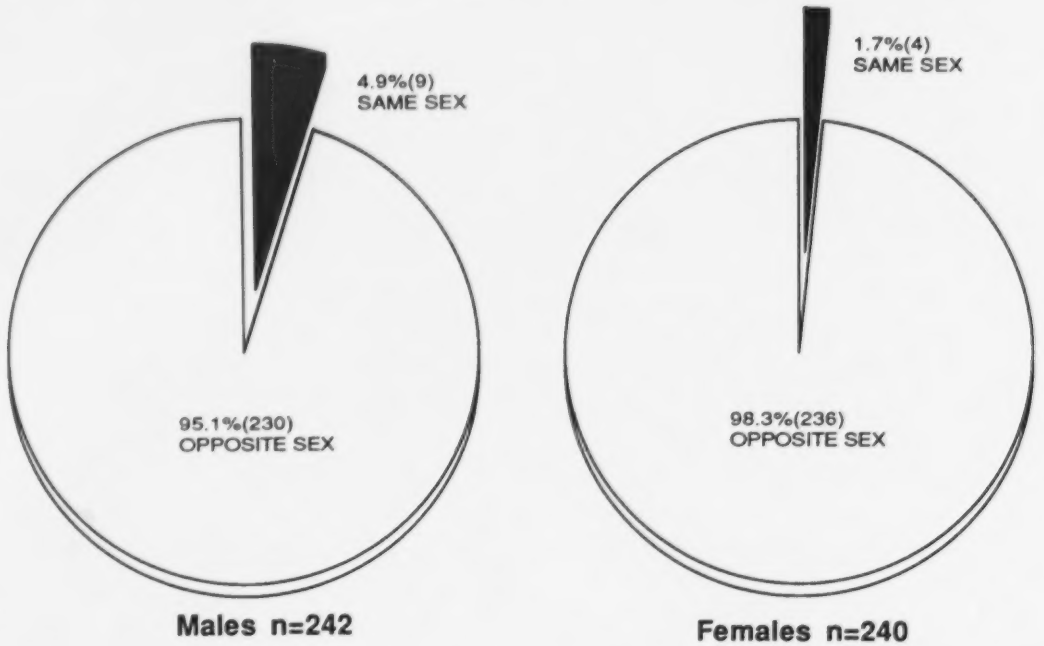
VII. Teenagers and Sexuality

Sexuality is often a highly heated topic when it comes to teenagers. Experts and parents disagree about the messages that teens should and do receive from sources such as the broadcast media and health personnel. In the survey, respondents were asked several questions pertaining to sexual orientation, sexual relationships, frequency of intercourse, use of birth control, and sexually transmitted diseases.

Sexual Orientation

Students were asked about their sexual partners to ascertain whom they preferred, males or females. However, it should be noted that during adolescence many teens experiment in having sex with the same sex and do not necessarily end up as homosexual adults. Even adult sexuality is a continuum between those who are exclusively homosexual to those who are exclusively heterosexual. Teenagers are just beginning to understand and come to terms with their hormones and their attendant feelings toward sex. In addition, each respondent who answered yes to having a sexual partner was asked specifically about their sexual preference. Figure 16 shows the majority of both males and females prefer the opposite sex. However, more males showed a preference for the same sex: 5 percent of the males, including the 3 percent who were bi-sexual, compared to 2 percent of the females. (See Figure 17)

Figure 17. Sexual Orientation by Gender
(Out of 484 Sexually Active Teens, 16 or 3.3 percent had same sex partners)

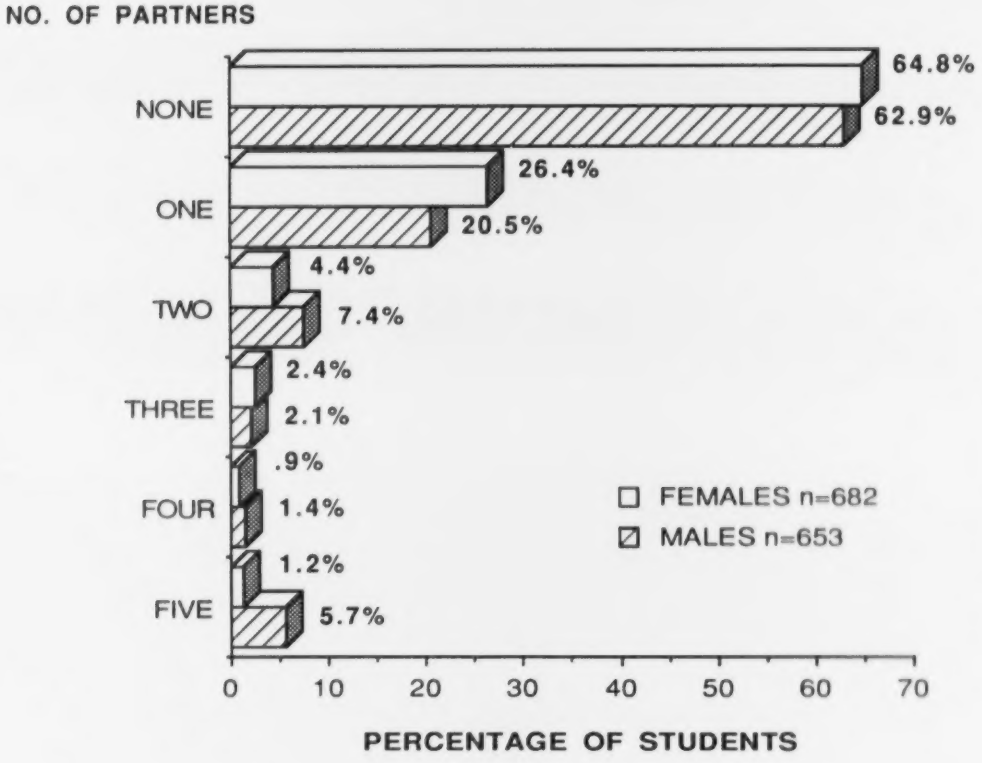


Most students were heterosexually identified, 98.3 percent of the females and 95 percent of the males had opposite sex partners.

Sexual Activity

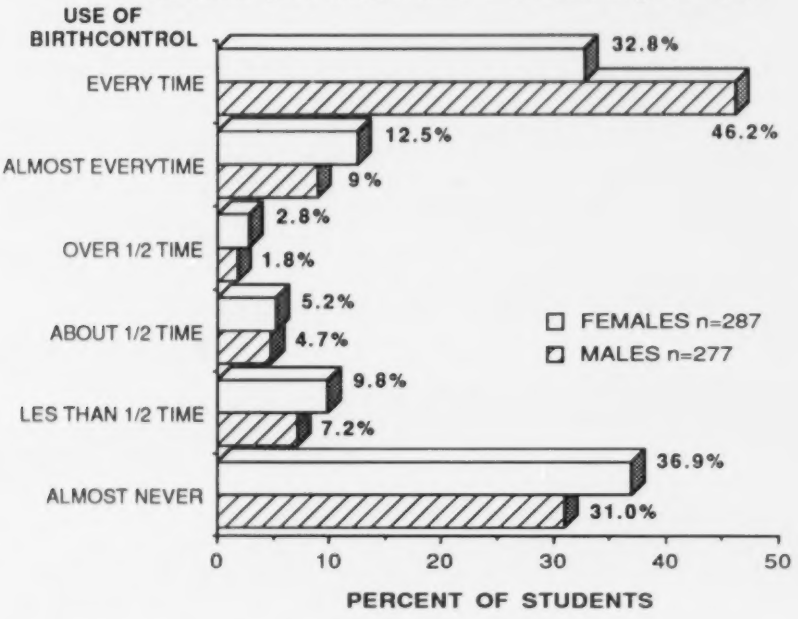
In Hawai'i, about 42 percent of the THA sophomores sampled were sexually active, meaning they engaged in sexual intercourse. Close to 40 percent said they had a lover at the time of the survey. However, a much larger percentage, 79 percent, reported ever having a lover. Figure 18 shows the responses to the question "How many people had you had sex with in the previous six months"? In Figure 18, we see the majority of students had only one sexual partner in the previous six months.

Figure 18. Number of Sexual Partners in Preceding Six Months by Gender



The survey asked females who are sexually active a series of questions about sexual health. Of the 287 females who are sexually active only 38 percent had a pelvic examination and only 33 percent used birth control every time they had sexual intercourse. However, among the males 46 percent said they used birth control at every sexual intercourse. The frequency of birth control method use is shown in Figure 19.

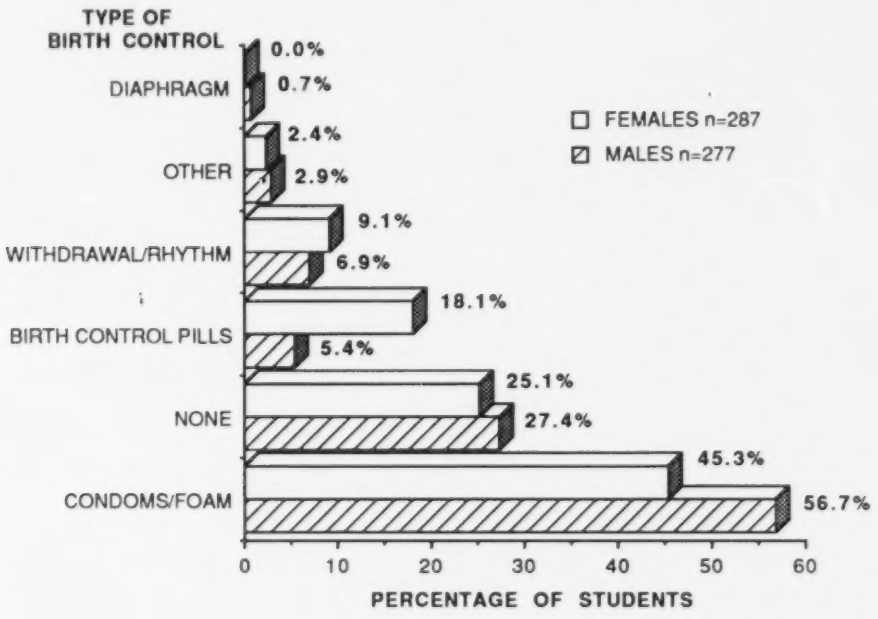
Figure 19. Frequency of Birth Control Method Use by Gender (Asked only of those who are sexually active)



Birth Control

While only 33 percent of the females used birth control regularly, they did use a variety of methods. (See Figure 20)

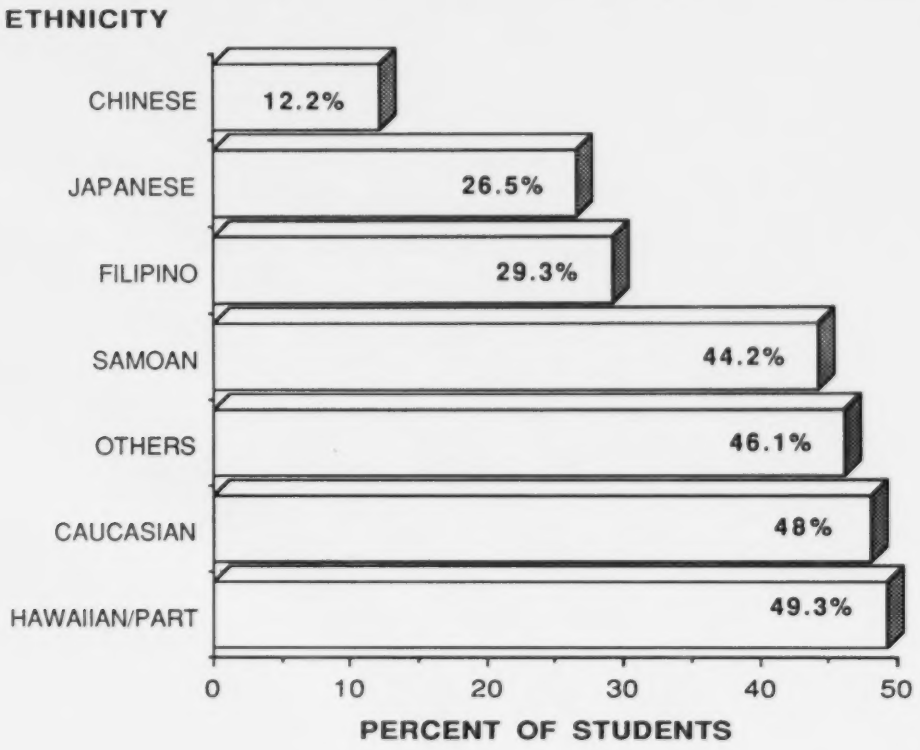
Figure 20. Types of Birth Control Used By Self or Partner



A larger proportion of the males used condoms and/or foam when compared to the females: 57 percent for males compared to 45 percent for females. The study questions did not separate those using condoms alone from those only using foam. It is apparent that teens prefer non-prescription methods of contraception to prescription methods. Females that were using a prescription method did prefer oral contraceptive or birth control pills (BCP). When asked if they felt BCP are safe, only 33 percent agreed they were. This might also contribute to teens preference for using other methods.

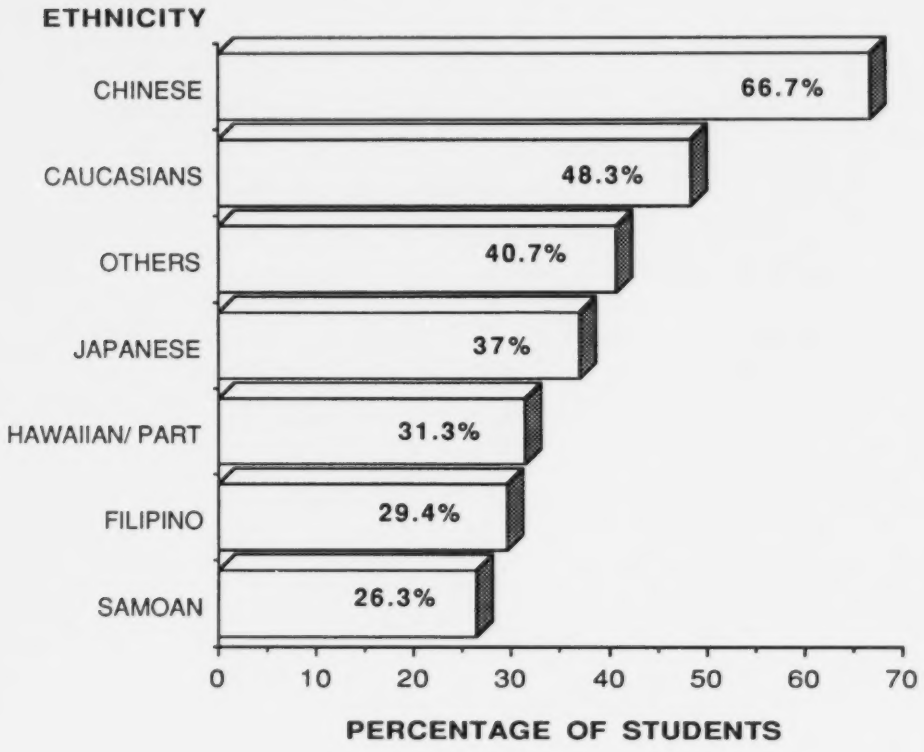
There are also marked differences in sexual activity and birth control use among ethnic groups. The Hawai'ians (49 percent) and the Caucasians (48 percent) had the highest rates of sexually active teens followed by Others (46 percent) and Samoans (44 percent). The Filipinos (29 percent), the Japanese (27 percent) and the Chinese (12 percent) had the lowest rates of sexual activity. (See Figure 21)

Figure 21. Percentage of Teens Who are Sexually Active by Ethnicity



Among those who are sexually active, the Chinese who report the least sexual activity use birth control the most (67 percent). The Caucasians use birth control 49 percent of the time. The Filipinos (29 percent) and Samoans (26 percent) use birth control the least.

Figure 22. Percentage of Teens Who are Both Sexually Active and Have Ever Used Birth Control



Sexual Activity by Socio–Economic Strata

When comparing sexual activity to socio–economic stratum, 47 percent in the high and the low strata compared to 35 percent in the medium strata had engaged in sexual intercourse.

Sexually Transmitted Diseases (STDs)

A current teen health concern is the spread of STDs among a very young and vulnerable population. In light of the fact that the majority of those with Human Immunodeficiency Virus (HIV) probably contracted the disease as adolescents, there is much to address in STD prevention. The THA respondents were asked if they were worried about venereal disease – STDs. The responses to this question about STDs were cross–tabulated with the kinds of birth control used. (See Figures 23 & 24) Females were also asked about pelvic exams and if they had been pregnant.

Figure 23. A Comparison by Gender of Teens Who DO Worry About STDs and Use Protection

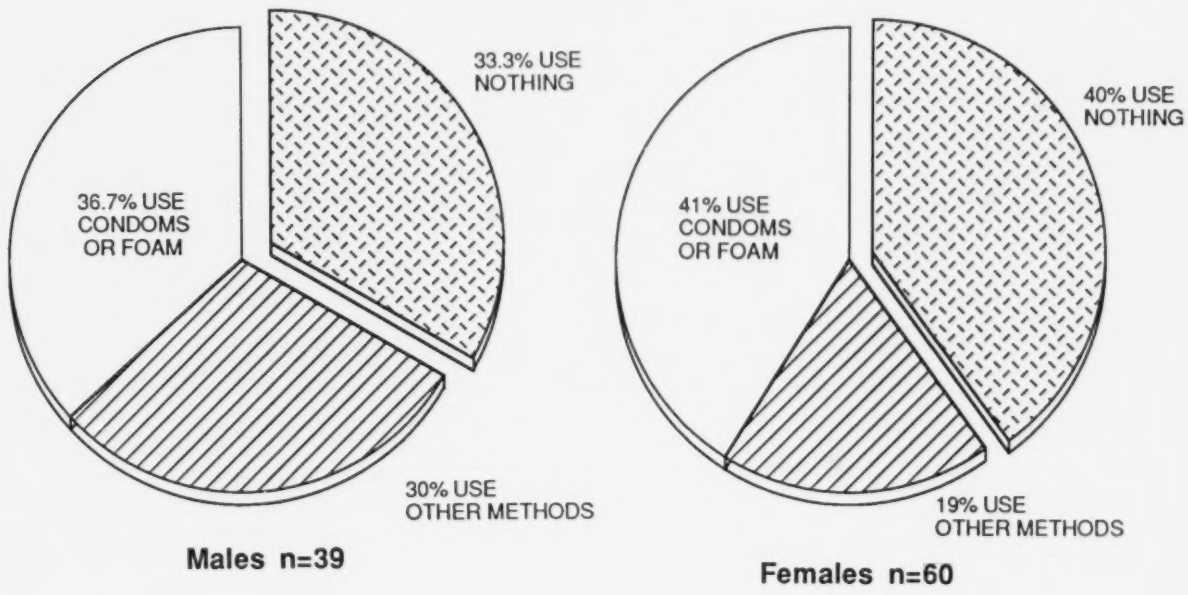
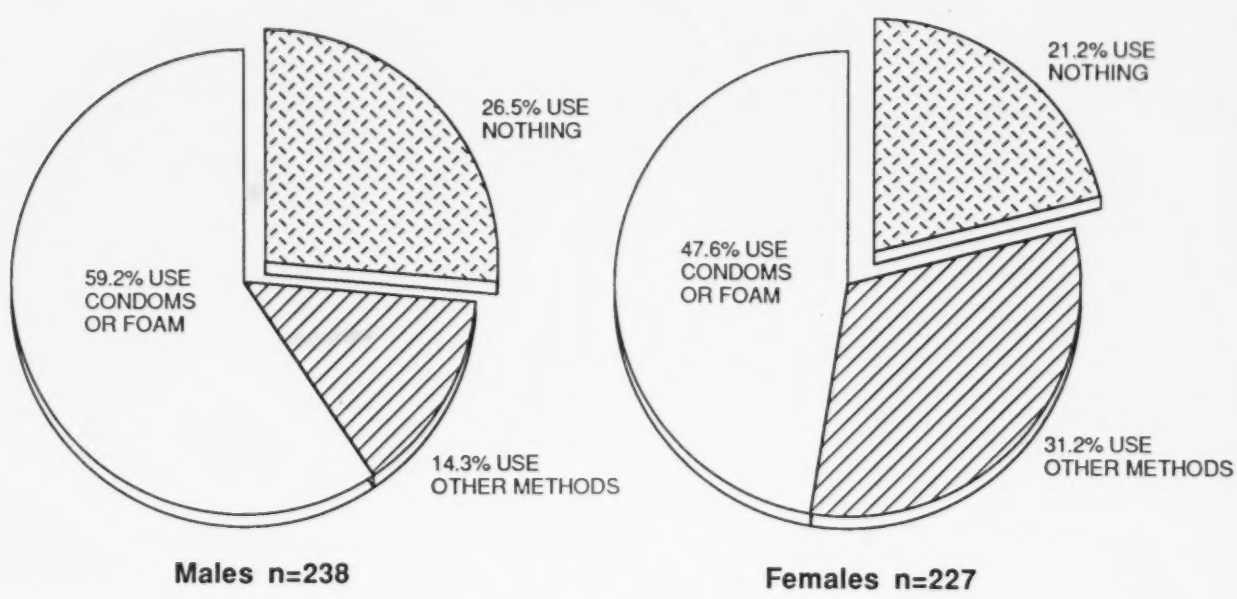


Figure 24. A Comparison by Gender of Teens Who Do Not Worry About STDs and Use Protection



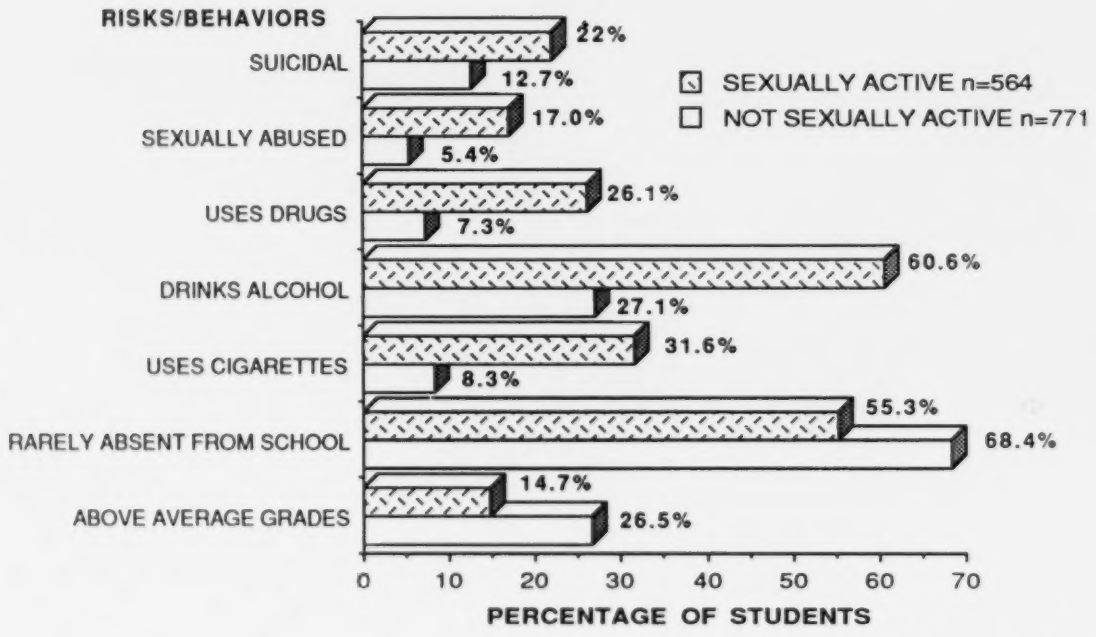
It appears that a larger percentage of teens do not worry about STDs. However, what is perhaps more important is the percentage of sexually active teens: 60 percent of the males and 48 percent of the females, who use condoms are not worried about STDs. A much smaller percentage who are worried about STDs use condoms: 41 percent of the females and 37 percent of the males, use condoms. However, a large percentage of THA teens were not protecting themselves against STDs – 148 out of 564 or 26 percent.

Females who were sexually active were asked specific medical questions about utilization of appropriate services. Ninety-five percent of the females were menstruating regularly but only 38 percent of those who were sexually active had at least one pelvic examination. However, 14 percent of those sexually active had gone for a pregnancy test or been pregnant.

Sexual Activity and Risk

Of those who are sexually active there are striking differences in their emotional, physical and environmental make-up compared to those who are not sexually active.(See Figure 25)

Figure 25. The Relationship of Sexual Activity to Select Risk Factors and Behaviors



Those who are sexually active are more likely to have been sexually abused, 17 percent of those who are sexually active compared to 5 percent of those who are not sexually active. Twenty-six percent of those who are sexually active use drugs compared to 7 percent of those who are not sexually active. Those who are sexually active are also less likely to have above average grades and few absences from school.

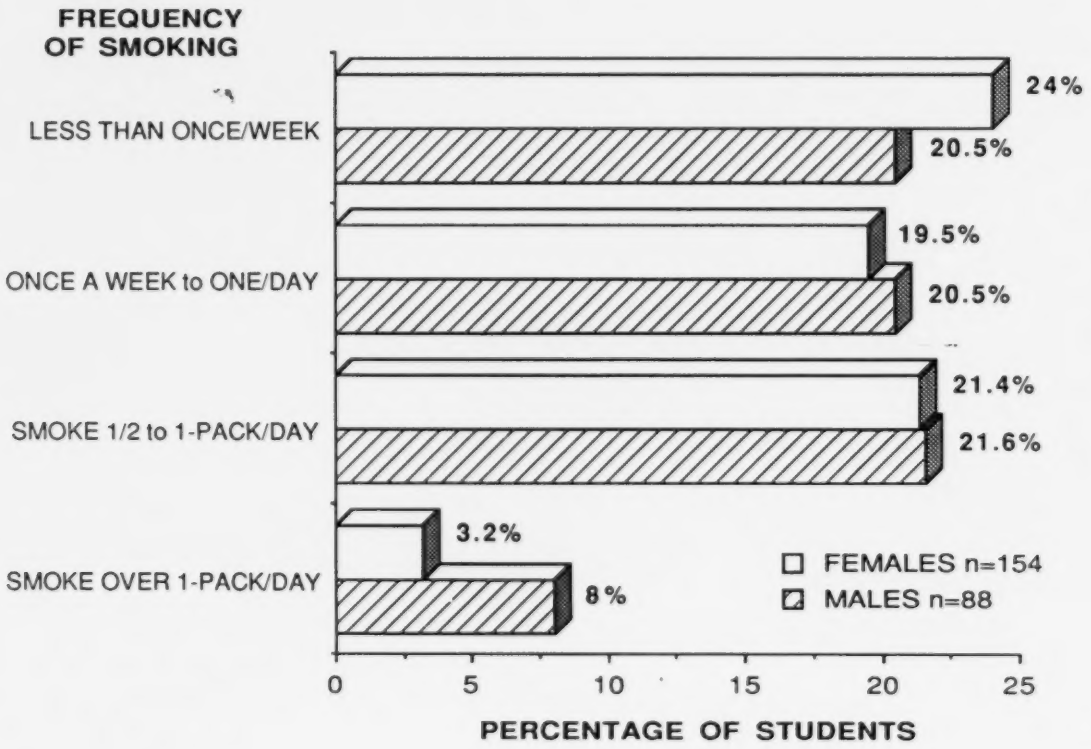
VIII. Substance Use

Students participating in the THA survey were asked about their frequency and patterns of use for a number of substances, including tobacco, cocaine, pain pills and heroin.

Cigarette Smoking

Among tenth graders, 18 percent have ever smoked cigarettes. However, there were marked differences in smoking rates by gender, 14 percent of the males and 23 percent of the females smoked cigarettes. The frequency of cigarette smoking shows a similar breakdown in the percentage of females and males smoking. However, more males (8 percent) smoke more than a package of cigarettes in one day than do females (3 percent).(See Figure 26)

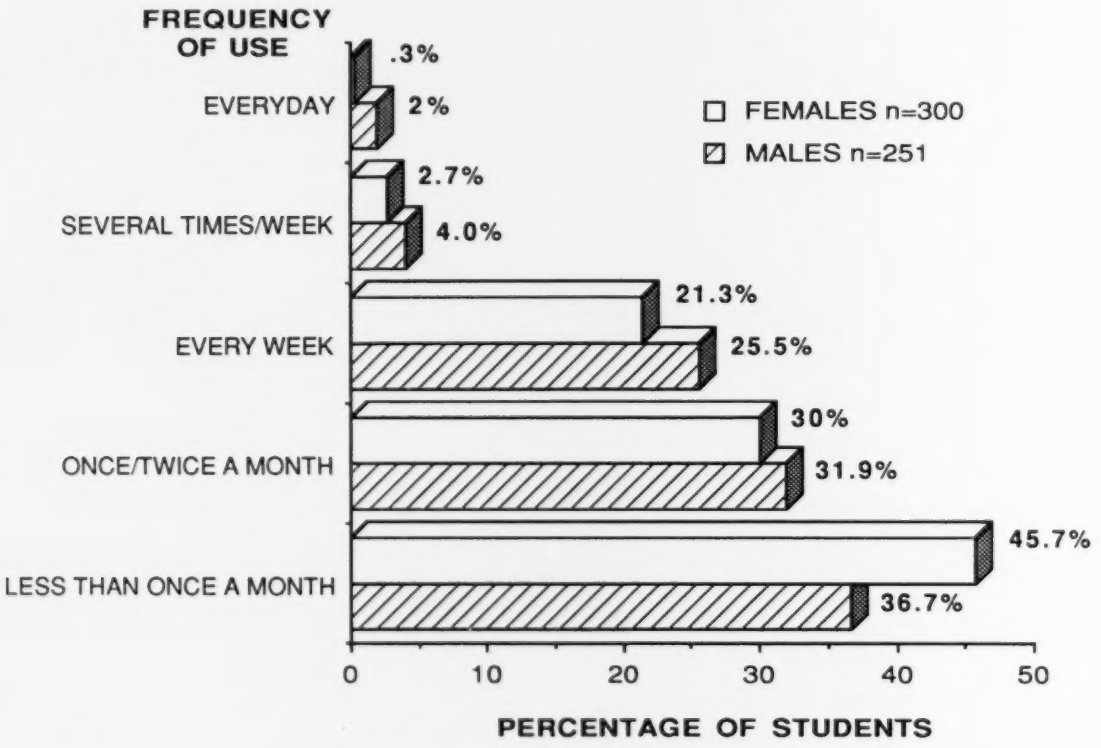
Figure 26. Frequency of Cigarette Smoking by Gender



Alcohol

Alcohol use is a critical issue in looking at Hawai'i's teen health behaviors. The frequency of alcohol use is shown in Figure 27. Forty-four percent of the total females sampled compared to 38 percent of the total males sampled have ever used alcohol. Among the THA respondents 37 percent of the males and 46 percent of the females drink alcohol less than once a month. Two percent of the males compared to less than 1 percent of the females drink alcohol everyday.

Figure 27. Frequency of Alcohol Use by Gender

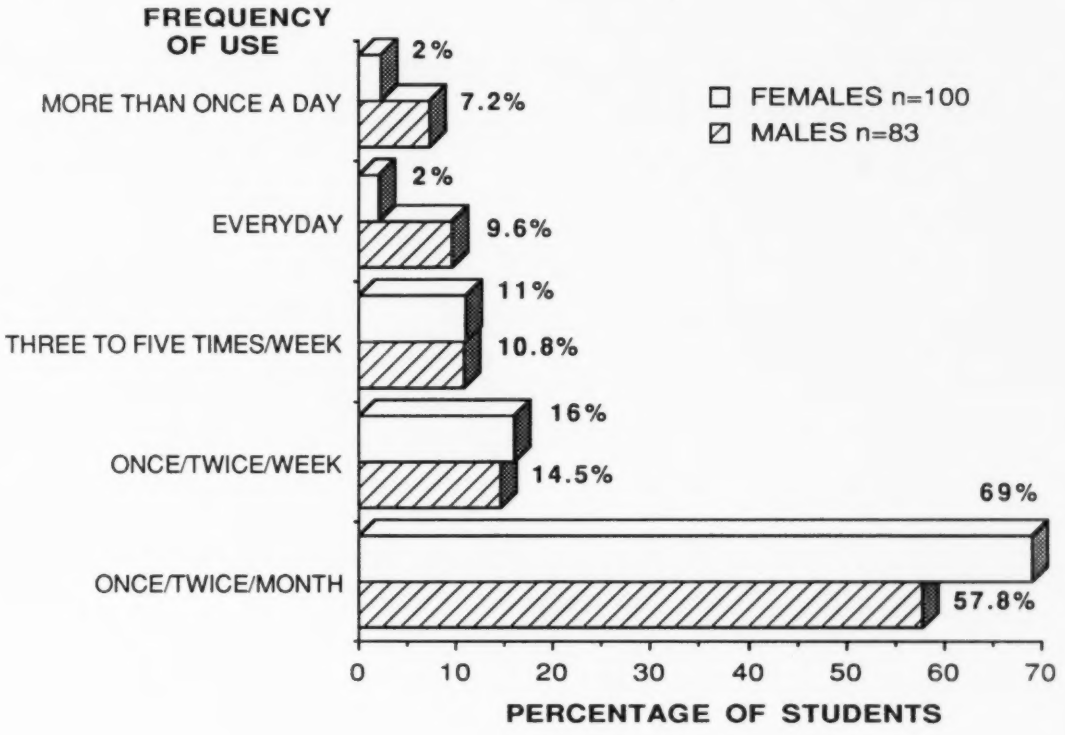


When it comes to the type of alcoholic beverages, males preferred beer and females preferred mixed drinks. Sixty-four percent of the males usually drank beer compared to 33 percent of the females. The amount of alcohol consumed is perhaps a better indicator of alcohol abuse. Very few teens who used alcohol consumed only one or two drinks (22 percent), the majority (78 percent) drank three or more drinks until they "felt high". More females (39 percent) had 3 or more drinks and more males (47 percent) drank until they "felt high".

Marijuana

Marijuana, or as it is more commonly called "pakalolo", and is smoked by Hawai'i's youth despite efforts at eradication which have exponentially increased the street costs of the drug. Close to fourteen percent of the THA sample had ever smoked pakalolo. Figure 28 shows the frequency of marijuana use among those who said they ever used it.

Figure 28. Frequency of Marijuana Use by Gender



Again, more females (15 percent) than males (13 percent) admitted to smoking marijuana. However, more males smoked daily or more than once a day, 17 percent compared to 4 percent of the females.

Other Drugs

Questions on other drugs included amphetamines and "ice" (a methamphetamine), sedatives and downers, crack and cocaine, PCP and hallucinogens. Students were also asked if they mixed these drugs with alcohol. (See Table 7) The percentages in Table 7 refer only to those students who reported ever trying drugs.

Table 7. Frequency of Use of Other Substances by Gender
(Includes only students who reported using these drugs. Used = in their lifetime. Frequently used = many times)

SUBSTANCES	MALES n=92		FEMALES n=111	
	EVER USED	FREQ. USED	EVER USED	FREQ. USED
HALLUCINOGENS	57.6% (53)	14% (13)	41.4% (46)	6.3% (7)
SPEED/AMPHETAMINES	47.8% (44)	12% (11)	61.3% (68)	20% (20)
SEDATIVES/DOWNERS	23.9% (22)	5.4% (5)	29.7% (33)	4.5% (5)
CODEINE/MORPHINE/HEROIN	16.3% (15)	5.4% (5)	21.6% (24)	1.8% (2)
PCP/ANGEL DUST	12% (11)	5.4% (5)	9% (10)	0% (0)
COCAINE/CRACK	41.3% (38)	6.5% (6)	45% (50)	9.9% (11)
DRUGS MIXED WITH ALCOHOL	43.5% (40)	13% (12)	50% (56)	8.1% (9)

Overall, more females were using other substances than males: 16 percent of the females ever used substances compared to 14 percent of the males. However, the type of substance preferred is different. More females who ever used substances, 68 percent, preferred stimulants, which include diet pills, and more males preferred hallucinogens, 58 percent. Overall, more males frequently used all the other substances listed in Table 8 with the exception of cocaine, pain pills and stimulants, which more females reported using. More females were also likely to mix alcohol with these substances than males: 50 percent of the females compared to 44 percent of the males. In Table 8, the relatively limited use of cigarettes, alcohol and marijuana are compared to the respondents ethnicity. Chinese, Filipinos and Japanese are least likely to use substances and Caucasians and Hawaiians/Part Hawaiians are the most likely to use these substances.

Table 8. Non-Use of Cigarettes, Marijuana and Alcohol By Ethnicity

ETHNICITY	ALMOST NEVER SMOKE OR USE		
	CIGARETTES	MARIJUANA	ALCOHOL
FILIPINO n=174	87.9	93.1	71.3
CHINESE n=49	100	98	79.6
CAUCASIAN n=302	80.5	85.4	52
SAMOAN n=43	76.7	88.4	60.5
JAPANESE n=102	86.3	91.2	70.6
HAWAIIAN/PART n=293	74.7	77	49.7
OTHER n=373	82.8	87.9	59.2

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IX. Self-Esteem

Self-esteem refers to the feelings and attitudes toward the self and is regarded as a significant factor in people's evaluation of themselves and their perceived abilities. In general, teenagers with high self-esteem are expected to predict good adjustment and exhibit behaviors valued by society demonstrated by such factors as good grades, little or no drug and alcohol use, and no involvement in violence. In contrast, those teenagers who have low self-esteem may engage in undesirable or anti-social behaviors, such as getting poor grades, using drugs and alcohol, and getting into physical fights with their peers. (S. Crockenberg & B. Soby, "Self- Esteem and Teenage Pregnancy" in The Social Importance of Self-Esteem edited by A. Mecca et. al.)

In the THA study, 34 questions pertaining to self-esteem were asked. Ten questions came from a scale devised by Dr. Rosenberg, a renown expert on self-esteem, called the Self Esteem Scale. The other twenty-four questions came from another expert, Dr. Coopersmith, who devised a Self-Esteem Inventory which looks at self-esteem in four areas of teen life: (1) General self, (2) Social Self -Peers, (3) Home - Parents, and (4) School - Academic. The THA used only the latter three scales deleting the general self scale since Rosenberg's scale was used. Both these scales were analyzed using a self-esteem evaluation tool developed by Likert. Likert's scoring allows for the creation of a graduated self-esteem rating from low to medium/low and from medium/high to high depending on how many questions the students answered for high self-esteem. Students were asked such questions as whether they were popular with their peers, whether their parents expected too much of them and whether they felt useless at times.

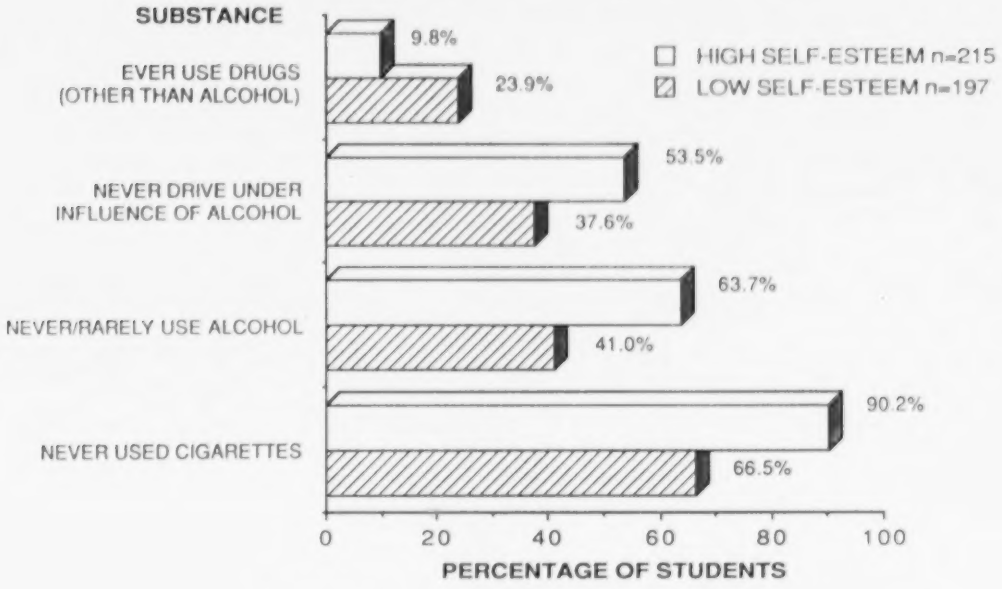
While the Adolescent Health Network selected nationally recognized measures of self-esteem, we realize that no research has been done to determine whether these instruments accurately measure self-esteem in Pacific Islanders and Asians cultures. Some anecdotal evidence suggests, at least for Native Hawai'ians, these measures may not be culturally appropriate.

In this chapter, self-esteem is analyzed in reference to the behaviors, feelings and potential risk factors where there are the most striking differences between those with high and low self-esteem. In the following discussion, unless stated otherwise, the definition of high and low self-esteem is derived from Dr. Rosenberg's questions.

Self-Esteem and Substance Abuse

The differences between those with low and high esteem were striking with substance use. Those with high self-esteem had lower rates of substance use especially for using "other drugs". Twenty-four percent of those with low self-esteem compared to 10 percent of those with high self-esteem used drugs other than alcohol. (see Figure 29)

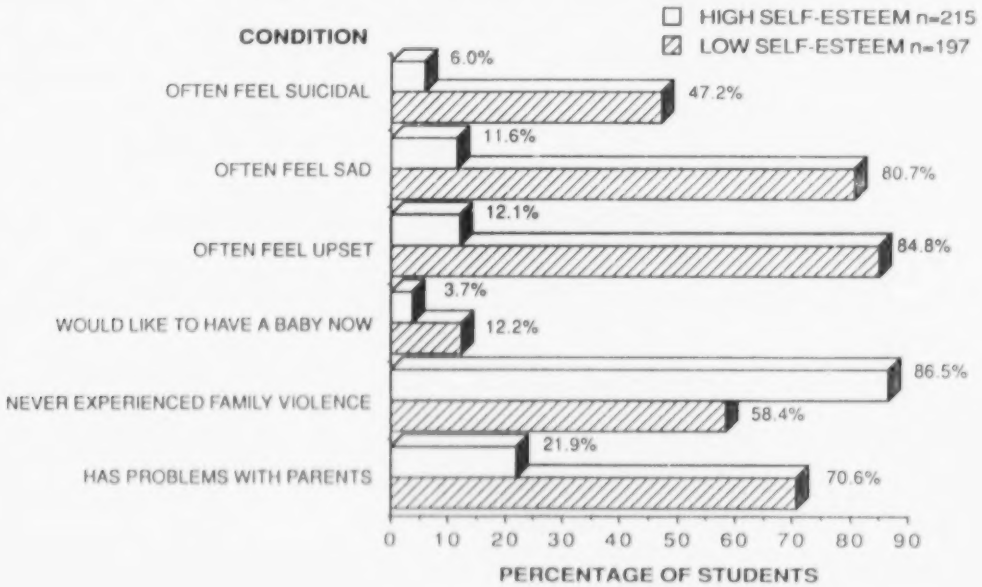
Figure 29. Self – Esteem and Substance Abuse



Self-Esteem and Mental Health

In almost all of the mental health issues, there was at least a two-fold difference between those with high self-esteem and those with low self-esteem. Those with high esteem rarely felt sad (12 percent) or suicidal (6 percent). In contrast, those with low esteem often felt sad (81 percent) and suicidal (47 percent). Although, the numbers are small, those teenagers with low self-esteem were much more likely to want a baby (12 percent) compared to those with high esteem (4 percent). (see Figure 30)

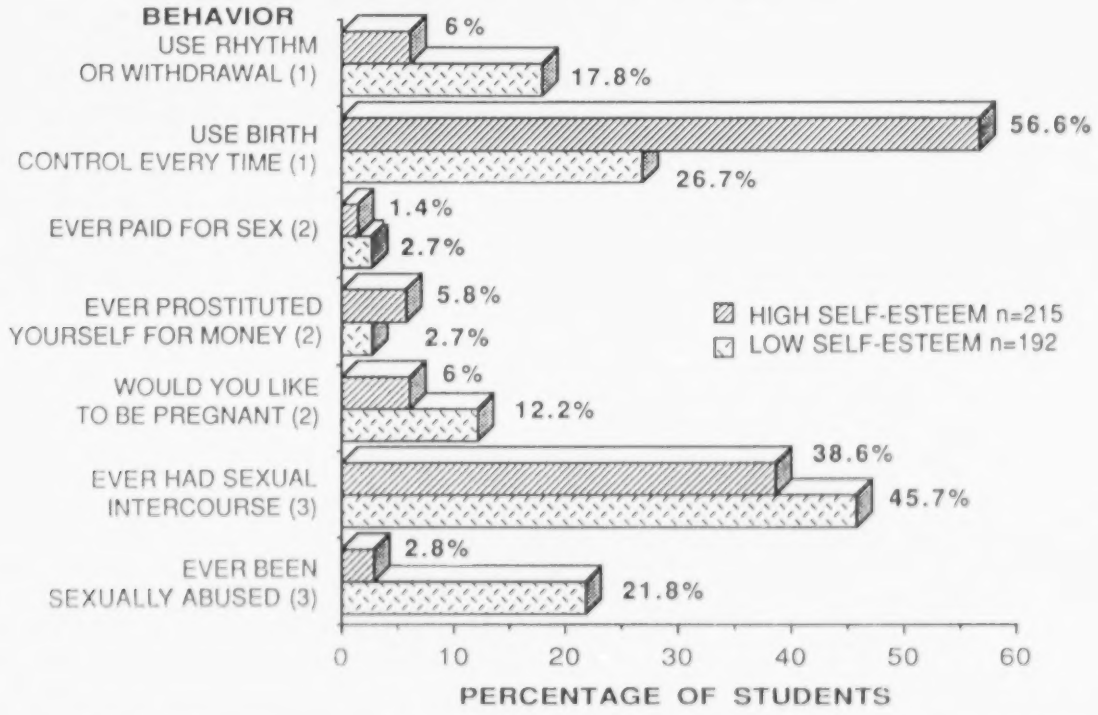
Figure 30. Self-Esteem and Mental Health



Self-Esteem and Sexuality

Figure 31 shows those with low self-esteem were much more likely to have been sexually abused (22 percent) compared to those with high esteem (3 percent). Those with low esteem (46 percent) were also more likely to have had sexual intercourse than those with high esteem (39 percent). The one exception was the case of THA teenagers prostituting themselves. Those with high-self-esteem were more likely (6 percent) to prostitute themselves than those with low self-esteem (3 percent). When it comes to using a birth control method (BCM) everytime they have intercourse, only 27 percent of those with low esteem compared to 57 percent of those with high esteem used a BCM consistently.

Figure 31. Self-Esteem and Sexuality



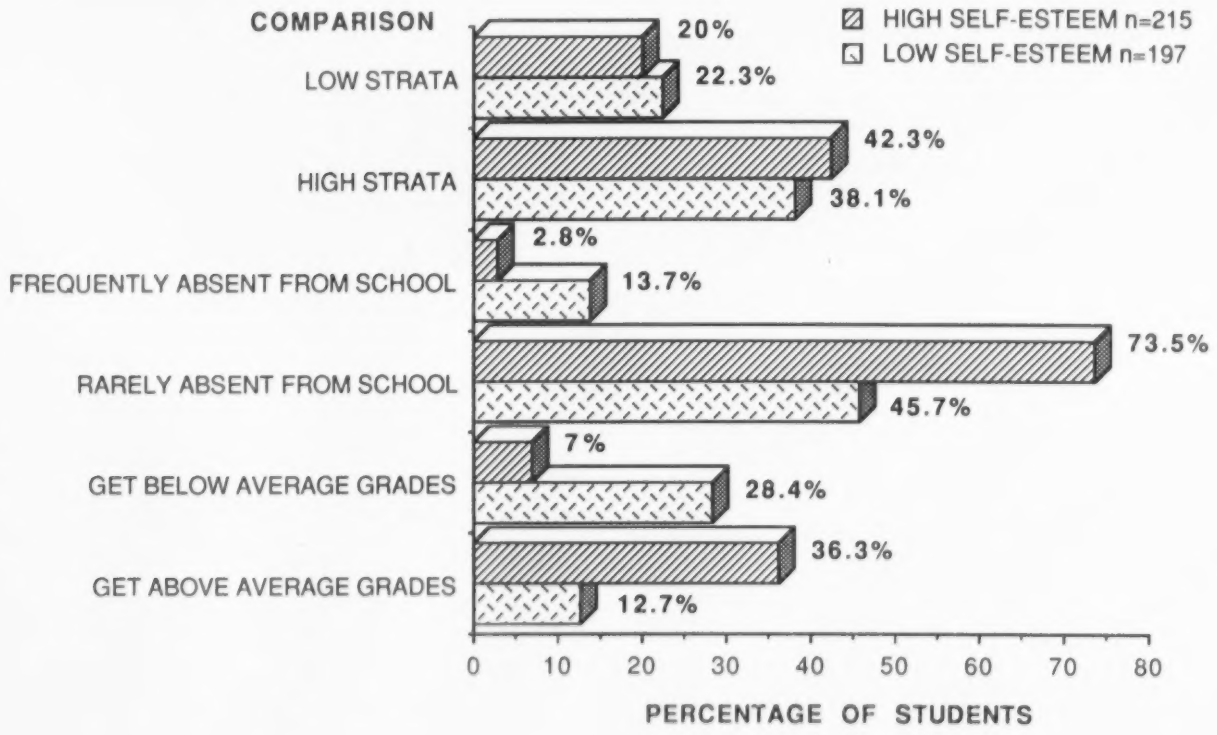
(1) These questions were asked of Students who had Sexual Intercourse in the previous 6-months. (Base: Low-Esteem n=90 / High-Esteem n=83)
(2) These questions were asked only of those with Sexual Partners. (Base: Low-Esteem n=74 / High-Esteem n=69)
(3) These questions were asked of All the THA Students Surveyed. (Base: Low-Esteem n=197 / High-Esteem n=215)

Looking at self-esteem on the basis of Coopersmith's 24 questions, those who had sexual intercourse had high self-esteem as it related to their peers (44 percent) but considerably lower self-esteem as it related to their home (30 percent) and school (32 percent). This suggests the effects of peer pressure may play a role in influencing sexual behavior.

Self-Esteem, School Performance and Socio-Economic Strata

With school performance indicators, all of those respondents with high esteem did much better than those with low esteem. As shown in Figure 32, the most dramatic difference is with those who got below average grades: 28 percent of those with low esteem compared to only 7 percent of those with high esteem got low marks. In the higher socio-economic strata there was a larger percentage of teens with high esteem. However, in the lower socio-economic strata those with low and high esteem were about equal and the majority fell in between low and high.

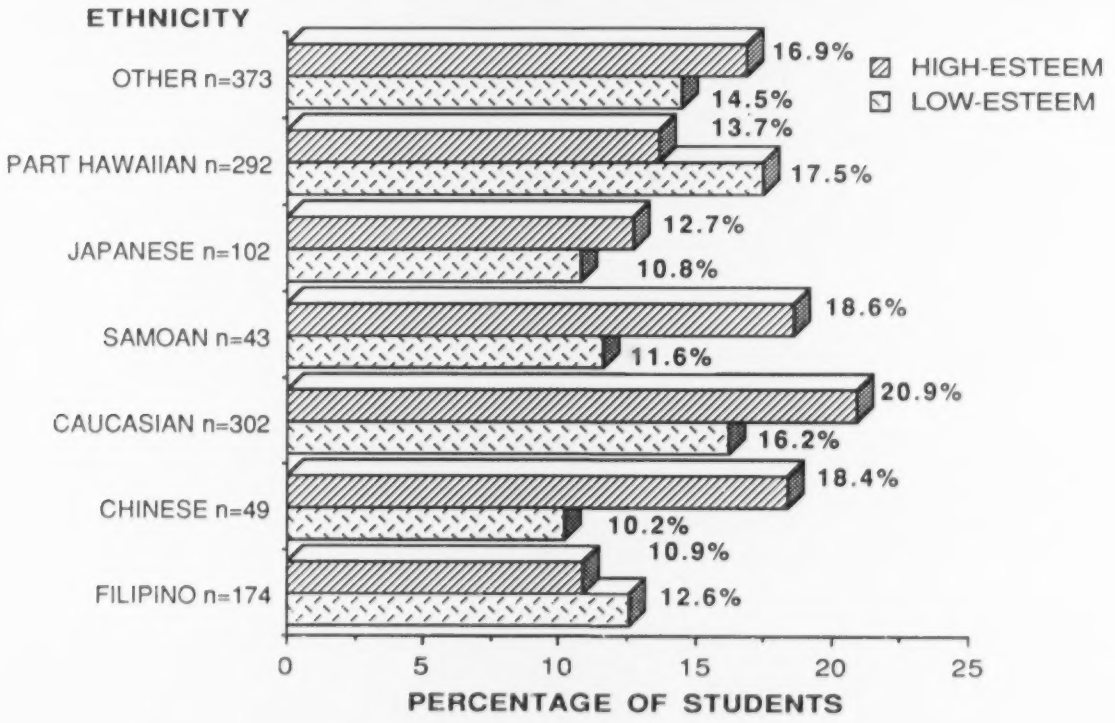
Figure 32. Self-Esteem and School Performance and Socio-Economic Strata



Self-Esteem and Ethnicity

As shown in Figure 33, for every ethnicity, with the exception of the Filipinos and the Hawai'ians, a larger percentage of students had high self-esteem than those who had low self-esteem. The Caucasians had the largest percentage of students high self-esteem, 21 percent, and the Hawai'ians the largest percentage of students with low self-esteem, 18 percent. Caucasians also had the second highest percentage of students with low self-esteem, 16 percent. The Samoan students also rated high in proportion of students with high self-esteem, 19 percent.

Figure 33. Self-Esteem and Ethnicity



It should be noted that the majority of students, 60 to 70 percent, fell in between in the low/medium to medium/high self-esteem scales.

X. Conclusions and Challenges for the Future of Adolescent Health

The findings of the Hawai'i Teen Health Advisor survey are both startling in their deviation from the national norms and reassuring in these differences. In conclusion, several selected comparisons are made between the Hawai'i Adolescent Health Network survey (HAHS), the February 1989 State of Adolescent Health in Minnesota survey (MAHS), the 1989 State Of Adolescent Health in Alaska survey (AAHS) and the national "Monitoring the Future" survey with data collection done by Bachman, Johnston and O'Malley at the Institute for Social Research at the University of Michigan in 1987 (MTF). The comparisons made between states and the national survey are limited due to different research instrument designs and the type of survey questions asked.

Hawai'i, in accordance with national trends, had higher numbers of females reporting sexual abuse than males. The rate of physical abuse was slightly higher for males in Hawai'i (12 percent) than males in Alaska (8 percent) and males in Minnesota (4 percent). Hawai'i had higher rates of physical abuse in the home environment than Minnesota but significantly lower than Alaska females. Seventeen percent of Hawai'i's females reported sexual abuse compared to 30 percent in Alaska and 16 percent in Minnesota.

Table 9. Comparison of Physical and Sexual Abuse for Tenth Graders in Hawai'i[1], Alaska[2] and Minnesota[3] by Gender (In percent)

EVER BEEN PHYSICALLY ABUSED:	MALES	FEMALES
HAWAII	12	18
ALASKA	8	29
MINNESOTA	4	13

EVER BEEN SEXUALLY ABUSED:	MALES	FEMALES
HAWAII	4	17
ALASKA	4	30
MINNESOTA	2	16

1. Adolescent Health in Hawai'i: the Adolescent Health Network's Teen Health Advisor Report, February 1991. In this survey students were asked if they had seen or experienced physical abuse. The percentage of respondents who answered yes to this question are listed in Table 9. Note the Hawai'i data varies in comparison to Alaska and Minnesota.

2. The State of Adolescent Health in Alaska, Alaska State Department of Health et al., May 1990.

3. The State of Adolescent Health in Minnesota, University of Minnesota Adolescent Health Program, 1989.

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Hawai'i has slightly higher rates of teen males engaging in sexual intercourse than the national average for males. In Table 10, we see that in Hawai'i 42 percent of the males and females engage in intercourse. While nationally according to MTF, 46 percent of the females compared to 39 percent of the males had intercourse. Hawai'i has lower rates than Alaska overall and higher rates than Minnesota for sexual activity.

Table 10. Comparison of Tenth Graders Reporting Ever Having Sexual Intercourse by Gender (In Percent)

10th GRADE STUDENTS FROM:	MALES	FEMALES
HAWAII (1)	42	42
ALASKA (2)	52	52
MINNESOTA (3)	29	13
MONITORING THE FUTURE (4)	39	46

1. Adolescent Health in Hawai'i: the Adolescent Health Network's Teen Health Advisor Report, February 1991. The question here was asked of tenth graders whose average age was 15.5 years.

2. The State of Adolescent Health in Alaska, Alaska State Department of Health et al., May 1990.In this survey students were assessment by age and these figures represent those 16 years old.

3. The State of Adolescent Health in Minnesota, University of Minnesota Adolescent Health Program, 1989.In this survey students were assessed by age and these figures represent those 16 years old.

4. Bachman, J.G., Johnston, L.D., O'Malley, P.M., (1987) Monitoring the Future: Questionnaire from the nation's high school seniors, Ann Arbor, Survey Research Center, Institute for Social Research, University of Michigan.

In Hawai'i, the THA survey data on frequency of alcohol use differs significantly from the Department of Education Survey of the same population in 1989 as shown in Table 11.

Table 11. Frequency of Alcohol Use by Tenth Grade High School Students in Hawai'i by THA_1 and the 1989 DOE_2 (In percent)

	HAWAII THA		HAWAII DOE	
ALCOHOLIC BEVERAGES:	MALES	FEMALES	MALES	FEMALES
NEVER	62	56	25	29
LESS THAN MONTHLY	14	20	46	41
MONTHLY OR WEEKLY	22	23	19	16
DAILY	2	1	10	11

1. Adolescent Health in Hawai'i: the Adolescent Health Network's Teen Health Advisor Report, February 1991.

2. Dr. Dennis Deck and Philip Nickel's Substance Use Among Public School Students in Hawai'i, Northwest Regional Educational Laboratory, December 1989. Commissioned by the Hawai'i State Department of Education and conducted by Northwest Regional Educational Laboratory.

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We have not made any more comparisons to the National studies due to difficulty in creating meaningful and accurate comparisons between surveys conducted of all high school seniors and THA which focuses only on tenth grade sophomores. However, these comparisons to national studies reveal the following conclusions. THA male respondents are more likely to be physically abused than teens in Alaska and Minnesota. THA male respondents have slightly higher and females have slightly lower rates of sexual intercourse when compared to the national MTF survey. Hawaii THA respondents were much less likely to report alcohol use than the earlier DOE substance abuse survey respondents.

Overall Profile of THA Survey Data

The overall profile emerging from these data on Hawai'i's teenagers reflect the following:

- 42 percent engage in sexual intercourse.
  Of these, 39 percent use birth control regularly and consistently.
- 40 percent had problems at home with their parents or family.
  By gender, 50 percent of the females compared to 30 percent of the males had problems at home.
- 17 percent have attempted suicide.
- 10 percent have been sexually abused.
  By gender, 17 percent of all females have been sexually abused compared to 4 percent of the males.
- 18 percent use cigarettes.
  By gender, 23 percent of females use cigarettes compared to 14 percent of the males.
- 14 percent have used marijuana.
- 41 percent have used alcohol.
- 15 percent use drugs.
- Overall, the majority, 60–70 percent, of the THA survey respondents reported having medium self-esteem.
- Those with low self-esteem are more likely to engage in high risk behaviors than those who have high self-esteem.
  By ethnicity, 18 percent of Native Hawai'ians had low self-esteem and 21 percent of Caucasians had high self-esteem.

Challenges for the Future

1. Given the multiple needs of adolescents, the creation of multi-service centers that are school based or school linked where teenagers can receive an array of services, including health, social and vocational services at one convenient location are needed.

2. Given the high rates of violence and sexual abuse, state-wide violence prevention and conflict resolution programs must be extended to all Hawai'i's youth.

3. Given the higher rates of sexual activity and lower rates of birth control usage, improved accessibility and acceptability to reproductive health services is needed.

4. Given the array of emotional health issues faced by teenagers, more preventative mental health services, including substance use and abuse education, should be available at accessible locations.

5. Given the difficult decisions and life crises that face todays teens, relationship counseling including decision-making skills and life planning education needs to be provided as a mandatory requirement at all high schools in Hawai'i.

Challenges for Future Adolescent Health Survey Research

The revised THA data presented here with a few revisions could provide Hawai'i with an excellent survey tool for future research on other age groups. Given the extreme importance and the potential for comparison between states and the national studies, before research questions are revised from another survey tool their relative weight for easy comparison should be evaluated. Questions involving frequency of any behavior should be made by consulting other studies before designing new ones.

In order to make meaningful comparisons to other studies, an effort should be made to have both comparable data and to obtain a sampling of all Hawai'is high school students.

For those interested in the computerized "Teen Health Advisor" program, inquiries can be addressed to **Dr. David Paperny,** Department of Pediatrics, Kaiser Permanente Honolulu Clinic, 1010 Pensacola, Honolulu, HI 96814.

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Errata : page 17

Teen Suicide

The respondents were asked questions about their emotional state including key questions about suicide. About two out of every five respondents reported they often felt sad or felt sad recently (42 % and 37 % respectively). Close to 17 percent of the respondents had attempted suicide. Looking at male/female variation, a higher proportion of female teens than male teens indicated they were sad. In addition, 23 percent of the females compared to 10 percent of the males reported they have attempted suicide.

Students were determined "at risk" for suicide if they answered yes to any of the following (1) Are you often sad, upset or unhappy (2) Have you been feeling sad or down in spirits lately or (3) Did you ever attempt to kill yourself ? Of those who were at risk, 29 percent of the males compared to 42 percent of the females had attempted suicide. Of those who were at risk, "low risk" was defined as any teen who thought about suicide over six months ago or who could not remember their previous suicide attempt ; "high risk" was defined as any teen who thought about suicide in the previous six months. Table 4 compares some characteristics of high risk group and low risk group.

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VII. Teenagers and Sexuality

Sexuality is often a highly heated topic when it comes to teenagers. Experts and parents disagree about the messages that teens should and do receive from sources such as the broadcast media and health personnel. In the survey, respondents were asked several questions pertaining to sexual orientation, sexual relationships, frequency of intercourse, use of birth control, and sexually transmitted diseases.

Sexual Orientation

Students were asked about their sexual partners to ascertain whom they had sex with, males or females. However, it should be noted that during adolescence many teens experiment in having sex with the same and opposite sex. These early sexual experiences do not necessarily predict their adult sexual orientation. Even adult sexuality is a continuum between those who are exclusively homosexual to those who are exclusively heterosexual. Teenagers are just beginning to understand and come to terms with their hormones and their attendant feelings toward sex. In addition, each respondent who answered yes to having a sexual partner was asked specifically about their sexual preference. Figure 16 shows the majority of both males and females prefer the opposite sex. However, more males showed a preference for the same sex: 5 percent of the males, including the 3 percent who were bi-sexual, compared to 2 percent of the females. (See Figure 17)

Figure 17. Sexual Orientation by Gender
(Out of 484 Sexually Active Teens, 16 or 3.3 percent had same sex partners)

Most students were heterosexually identified, 98.3 percent of the females and 95 percent of the males had opposite sex partners.